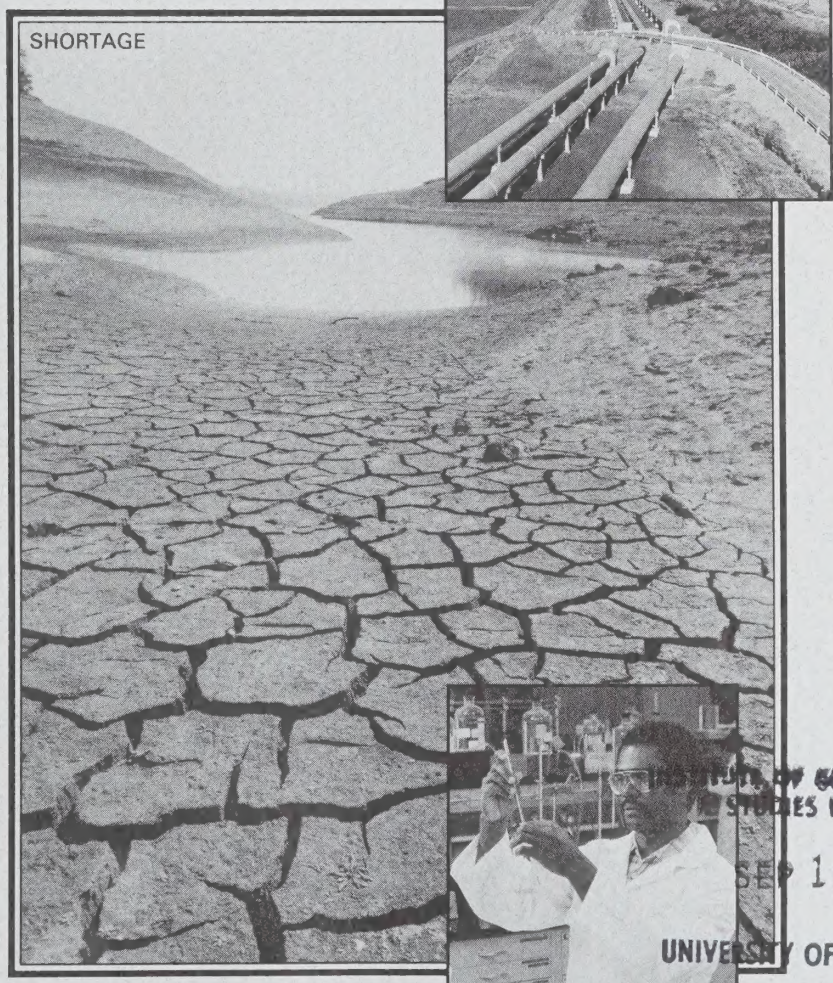


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WATER SUPPLY MANAGEMENT PROGRAM

Comments and Responses



SEPTEMBER 1988

East Bay Municipal Utility District



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**WATER SUPPLY
MANAGEMENT
PROGRAM**

REVISED DRAFT EIR

**VOLUME III
COMMENTS AND RESPONSES**

WATER SUPPLY MANAGEMENT PROGRAM

BOARD OF WATER

STAFF

ADMINISTRATIVE AND TECHNICAL

COMPOSITION OF REVISED DRAFT EIR

This revised Draft EIR on the Water Supply Management Program is comprised of the following:

- **Volume I, Revised Draft Environmental Impact Report**
- **Volume II, Technical Report and Appendices**
- **Volume III, Comments and Responses**

COMPOSITION OF REVISED PART III

1. Introduction to the study of the composition of the atmosphere
2. The atmosphere as a mixture of gases
3. The composition of the atmosphere at different altitudes
4. The composition of the atmosphere at different latitudes
5. The composition of the atmosphere at different seasons

PREFACE


In April 1988, the Water Supply Management Program Draft Environmental Impact Report (DEIR), Technical Report, and Summary were circulated for public review. Based on the comments received, a Revised DEIR, Technical Report and Summary have been prepared. Comments received through the review period and the responses to the comments are incorporated in this volume.

APPENDIX

It should be noted that the data presented in this appendix are not intended to be a substitute for the data presented in the main text. The data presented in this appendix are only for illustrative purposes and should not be used for any other purpose.

**WATER SUPPLY MANAGEMENT PROGRAM
COMMENTS AND RESPONSES
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ORGANIZATION OF PUBLIC COMMENTS

General Comments

1. Public Comment Period
2. Obligation to Serve
3. Level of Rationing
4. Demand Projections
5. Service Area

Need for Storage

6. Need for Additional Storage
7. Risk of Aqueduct Outage in the Delta
8. Nuclear Accident at Rancho Seco
9. Decreasing Supply Availability

Alternatives

10. Non Structural and Combinations of Alternatives (Water Conservation, Water Reclamation, Water Marketing, Pricing, etc.)
11. Use of Delta Water
12. Secure Aqueducts in the Delta
13. Other Alternatives (desalinization, increased Mokelumne Usage, etc.)
14. American River
15. Economic Evaluation of Alternatives

Buckhorn Project Impacts

16. Buckhorn Pipeline Alignment
17. Buckhorn Pumping Plant Site
18. Buckhorn Tunnel Alignment
19. Buckhorn Reservoir
20. Slide Potential at Buckhorn
21. Seismic Safety of Buckhorn
22. Destruction of Open Space
23. Biological and Archaeological Impacts
24. Growth Inducement
25. Cumulative Impacts
26. Beneficial Impacts
27. Mitigation
28. Cost Allocation of Buckhorn Reservoir
29. Alternatives to the Buckhorn Site

Pinole Site Impacts

30. Pinole Reservoir
31. Biological and Archaeological Impacts

Los Vaqueros Site

32. Los Vaqueros Reservoir

Protection of Source

33. Protection of Source

LIST OF NAMES AND ORGANIZATIONS WHOSE COMMENTS WERE RECEIVED

1. Dana K. Ripley, Allied Engineers Inc.
2. Gilbert Serota, The Orinda Association
3. C. E. McClure
4. Arthur B. Geen, Alameda County Taxpayers Association
5. Leonard Conly, Nuclear-Free Berkeley Committee
6. M. Rukman
7. Omar Chatty
8. Peter Berck, Dept. of Agricultural & Resource Economics, U. C. Berkeley
9. Jeremy Roschille
10. Steve Meyers
11. Arthur Burch
12. Nancy J. Nadel
13. Arnold B. Jonas, City of Alameda, Planning Department
14. James K. Sayre, Ecology Action
15. John A. Peterson, Editor, Contra Costa Sun
16. Robert R. Tuttle
17. C. Foster Durham
18. John R. Tulley
19. Hazel & Paul Shewell
20. Richard Young
21. H. S. Pete Fowler
22. Mary Ann McLeod, The Mulberry Tree Preschool
23. Wayne Rodrick
24. Audrey B. Sayre
25. Norma Cuneo
26. Clark D. Frentzen
27. Christine J. Cremer
28. James P. Blickenstaff, Sierra Club
29. Sally McKirgan
30. Ray & Vi Boody
31. Candace Howes Berthrong
32. Adel Hogan
33. William L. Knecht
34. Forrest M. Smith
35. Charles S. Mavinovich
36. Don Peralta, County of Alameda, Board of Supervisors
37. Robert R. Doelle
38. Robert J. Mowris, Buckhorn Canyon Preservation Council
39. William T. Dabel, Mayor of Orinda
40. David A. Thompson
41. Victor & Edna Gunther
42. Francheon Christner, West Contra Costa County Grey Panthers
43. Scott Weston
44. Paul V. Boero
45. Rita & Fred Keeperman
46. Ralph B. Hogan, Jr.
47. Mr. & Mrs. Thomas J. Connolly
48. Frank G. Delfino
49. Carlos P. Bear
50. Anthony C. Fisher, Dept. of Agric. & Resource Economics, U. C. Berkeley

51. Nancy B. Prickett
52. David P. Spath, Dept. of Health Services
53. Tom Buckingham
54. Moraga Public Hearing Comments
55. Francis L. Fleurbaaij
56. Ron & Sandy Tarica
57. Ken Kofman, EBMUD Director
58. John Otterman, Buckhorn Canyon Preservation Council
59. Glanin S. Fischer
60. Susan Watson
61. William T. Dabel, Mayor of Orinda
62. Robert F. D. Adams, City Manager, Lafayette
63. William H. Bruvold, School of Public Health, U. C. Berkeley
64. Mr. & Mrs. R. V. Osmon
65. Glenn S. Yoshioka
66. Elliot J. Abers
67. Marjorie Bowman, Sierra Club
68. George E. Aiken
69. Roger Reeve
70. Ed Hartman
71. Edgar Mendelsohn
72. Kirk Peterson
73. Thomas J. Aiken, U. S. Department of Interior, Bureau of Reclamation
74. Paula Hartman
75. Walter S. Hale
76. Maureen Fitzpatrick
77. Marjorie Richman
78. Mary Anna McKinley
79. Donald E. Bradley, City Manager, City of Pinole
80. James W. Cutler, Local Agency Formation Commission of Contra Costa Co.
81. Patsy Allen, The California Native Plant Society
82. Ronald A. Rubenstein, Whiting, Rubenstein & Levy, Attorneys at Law
83. Malcolm J. Sproul
84. Margaret T. Nahmey
85. John Cooley, Superintendent, Moraga School District
86. E. Psathas
87. William & Helen Rees
88. Milton Feldstein, Bay Area Air Quality Management District
89. Christine K. Holmstrom
90. Tony de Bellis & Jodi Peper, The Ecology Movement
91. Doris Sloan
92. Carolyn & Ned Herrington
93. Stuart L. Somach, McDonough, Holland & Allen, Attorneys at Law
94. Anita C. Pender, Buckhorn Canyon Preservation Council
95. Patricia Martin
96. F. M. Martin
97. Zoe W. Klippert
98. Mary M. Smith, W. A. T. E. R. Committee
99. Robert & Julie Skrdla
100. Fred & Ramona Phares
101. George M. Oldenbourg
102. Peter Vorster
103. Carol Schemmerling, Urban Creeks Council
104. Aida M. Peterson

105. David Fullerton, Sierra Club, Water Committee
106. Donald Forman
107. Ora Huth, League of Women Voters in the Bay Area
108. Fr. Michael R. Carey, St. Mary's College
109. Jack P. Grant
110. Al Silbert
111. Michael J. Vandeman
112. Robert H. McLain
113. Rob Wells
114. Walter & Marjorie Thompson
115. Helen Unruh
116. James D. Nessler-Smith, Department of Fish and Game
117. Gregory Johnson. State Clearinghouse, Office of Planning and Research,
State of California
118. Leora R. Feeney, Golden Gate Audubon Society
119. Helen C. Richards
120. Carolyn Radisch, Planner, City of San Ramon
121. Deanna M. Wieman, U. S. EPA
122. Linda Christman, Assistant City Manager, City of Danville
123. John S. Gregg, Los Vaqueros, Contra Costa Water District
124. T. H. Lindenmeyer, East Bay Regional Park District
125. E. J. Unruh
126. Mr. & Mrs. White, Buckhorn Canyon Preservation Council
127. B. Polt
128. Robert J. Mowris, Buckhorn Canyon Preservation Council
129. Steve R. Miraglia
130. Patricia S. Reynolds
131. David & Gina Hiatt
132. Howard W. Kerr, Alameda County Drought Task Force
133. Gary Binger, Association of Bay Area Governments
134. A. U. Blendau
135. Juay Charney
136. Gloria A. Ingram
137. Oaragon O. Gaufts
138. Michael Caneon
139. Beverly W. Lane, Mayor of Danville
140. Mark Kalm
141. Gladys Engman
142. Katharine M. Schnardl
143. Mr. & Mrs. Homer J. Olsen
144. Ron R. Tresgey
145. C. Robert Bupp
146. Raymond H. Schermann
147. Robert L. Stosick
148. Leo H. Schell
149. Karen S. Schrock
150. Phyllis J. Elwood
151. Joseph S. Sykes
152. C. M. Fitzgerald
153. Howard F. Way
154. Jack R. Talan
155. Dr. H. Schoenholz

- 156. John K. Cassell
- 157. Mary & Lloyd Dressel
- 158. John K. Van DeKamp, State of California, Attorney General
- 159. Helen Burke, Director, EBMUD

GENERAL COMMENTS

ISSUE 1: PUBLIC COMMENT PERIOD

Comments

More time should be allowed for review of documents.

Orinda Associates
R. V. Osmon
Greg Johnson, Moraga Public Hearing
Councilmember Connors, Moraga Public Hearing
Al Silbert

I understood there would be another hearing, and now none is being held!

Kirk Peterson

Response

EBMUD received few complaints regarding the June 17 deadline. It was necessary to set the deadline to allow for timely preparation of response to comments received and revision of the Draft EIR (DEIR). The 45-day review period appears to have been adequate for most people. There will be a second public input period of 45 days when the revised EIR and response to public comments are distributed to increase the opportunity for public review and comment.

Comment

Sacramento County did not receive notice of the Public Hearing.

Jerry Meral, EBMUD Public Hearing

Response

The Summary, the Technical Report, and the Draft EIR on the WSMP were mailed on April 29, 1988 to the County Planning Director at 700 "H" Street, Sacramento, CA 95814, to the County Public Works Director at 827 7th Street, Sacramento, CA 95814 and to County Supervisors Illa Collin Grantland Johnson, Sandra Smoley, Jim Streng, and Toby Johnson all at 700 "H" Street, Sacramento, CA 95814. The notice of the public hearing was included in the cover letter as well as in the Summary.

Comment

The public may be misled by the term "technical report". It appears to be more an in-depth look at issues, and I urge that it be incorporated into the EIR.

Ken Kofman, Director, EBMUD

Response

Comment noted.

Comment

Throughout the EIR, the word "District" should be modified to clearly indicate what is Board policy and what is staff recommendation.

Ken Kofman, Director, EBMUD

Response

Comment noted; clearly a final WSMP decision has not been reached, the draft documents have been prepared to fully describe the issues and identify possible solutions. These drafts are the result of the project team (both independent consultants and staff) analyses.

ISSUE 2: OBLIGATION TO SERVE

Comment

There were several comments and questions regarding the District's policy on annexations and growth.

Arthur Burch
V. and E. Gunther
Frank Delfino
Paula Hartman
Carl Shanahorn, Moraga Public Hearing
Councilmember DePriester, Moraga Public Hearing
Councilmember Connors, Moraga Public Hearing
Councilmember Crossley, Moraga Public hearing.
Bay Area Air Quality Management District
Clark D. Frentzen, P.E.
Doris Sloan
Carolyn and Ned Herrington
Arnold Jonas, City of Alameda
James Blickenstaff, Sierra Club
William Knecht
Carol & Jane Shanahorn
F. M. Martin
Roger Reeve

Response

Refer to the "Service Obligation" Section of the Technical Report.

ISSUE 3: LEVEL OF RATIONING

Comment

There were several comments regarding the District's current and future policy on rationing.

Robert Tuttle

Clark Frentzen

Donn Dears

Carolyn and Ned Herrington

City of Lafayette

Gayle B. Uilkema

Frances Christoffersen

Al Silbert

Jean Magnaghi

H. T. Nelson

Contra Costa County Board of Supervisors

San Ramon City Council

Trevor C. Spencer

Albany City Council

V. and E. Gunther

City of Danville

Amy Fowler, EBMUD Public Hearing

William Dabel, Mayor of Orinda

David Fullerton, Sierra Club, Water Committee

Robert H. McClain

Ken Kofman, Director, EBMUD

Helen Burke, Director, EBMUD

Questioner, EBMUD Public Hearing

Michael J. Vandeman

Clark D. Frentzen, P.E.

Edgar Mendelsohn

Dennis Myrick

Robert I. Schroeder, CCC Supervisor

Diane Schinnerer, Mayor of San Ramon

Carolyn and Ned Herrington

City of Danville

John R. Tulley

Response

During the 1977 drought emergency, EBMUD customers reduced their water use an overall 39 percent. However, it is estimated that in the ensuing years customers spent \$115 million in 1988 dollars to replace lost landscaping. Additional costs included impacts on customers lifestyles and businesses.

In 1985, the District adopted a Policy on Water Supply Availability and Deficiency. As described in the technical report, the Policy established an acceptable maximum level of demand based on an allowable deficiency of 39 percent. Underlying this Policy was the intent that in a repeat of a 1976-77 drought, customers should not endure a hardship greater than previously experienced in 1976-77.

As water conservation efforts improve the efficient use of water, it becomes increasingly difficult for customers to achieve the same reduction in water use while maintaining similar lifestyles. The District's experience in 1987 and 1988 bear out this phenomenon. Therefore, it may not be reasonable to expect customers to reduce their water use by 39 percent as they did in 1977. It is currently estimated that District customers could only achieve a 35 percent reduction in water use with the same level of hardship as experienced in 1977.

Additional terminal storage would reduce the severity of rationing by providing standby storage which could be used during a drought. The Water Supply Management Program evaluates a change the District's current policy from 39 percent to 25 percent.

Comment

Thirty-five percent rationing for two years will achieve the same results as the 71 percent level of rationing you claim will be needed in a 13-month outage.

Michael J. Vandeman

Response

Stored water would last a shorter period if cutbacks are reduced, not a longer period.

Comment

Figure III-24 is misleading as the 25 percent reduction curve shows demand outstripping supply in 1990. However, by then, a 35 percent reduction is achievable which would imply demand will not exceed supply availability until about 2020.

Robert H. McClain

Response

If 25 percent rationing is achievable, then demand will exceed supply around 1990. If a 35 percent reduction is assumed then demand will outstrip supply by 1997.

Comment

Policy of customers voluntarily reducing their water use by 25 percent in the six months prior to the year of rationing needs to be presented to the Board and probably deleted as an invalid assumption.

Ken Kofman, Director, EBMUD

Response

In 1987 EBMUD recognized the potential drought situation and called for a voluntary 12 percent reduction in water use during the last half of the year. The voluntary reduction was not achieved. Therefore, it was concluded that it may not be reasonable to assume District customers would be able to reduce their water use by 25 percent in the second half of the first drought year as severe as a 1976 water year. Consequently, the 25 percent voluntary reduction during the first year of a drought was not assumed in demand calculations for the Water Supply Management Program.

Comment

How much additional supply/storage/conservation is necessary to reduce the level of rationing from 25 percent to 10 percent or Zero percent? What size reservoir is needed if rationing is kept at 39 percent without any reduction in the first year of a two year drought. What is needed if we assume a three year drought?

Ken Kofman, Director, EBMUD

Response

The analyses presented in the Technical Report (Chapter V) have been done under various assumptions. The table shows the impact that a three-year drought has on reservoir sizing. As can be observed, adding the third dry year consideration results in a larger need for storage than results from the 13 month outages criterion.

Deficiency During the Emergency	STORAGE (acre-feet)					
	EXAMPLE ONE			EXAMPLE TWO		
	Two Year Drought Only	13 Month Outage Only	Larger Event	Three Year Drought Only	13 Month Outage Only	Larger Event
39%	55,000	100,000	100,000	230,000	100,000	230,000
25%	95,000	145,000	145,000	315,000	145,000	315,000
10%	145,000	195,000	195,000	405,000	195,000	405,000
0%	175,000	230,000	230,000	465,000	230,000	465,000

Comment

Moraga should not legally challenge EBMUD's rationing plan for the current drought.

Joseph and Sandy Hogan

Response

Comment noted.

Comment

EBMUD should annually send to their existing customers a description of what the drought rate structure would be if a drought was occurring.

Patricia Burke, EBMUD Public Hearing

Response

Comment noted.

•

ISSUE 4: DEMAND PROJECTIONS

Comment

Why can't the projected increase in demand of 23 percent from 220 to 270 MGD be made consistent with the projected population increase of 7 percent by making low water use toilets and showers mandatory for new development?

Frank Delfino
City of Lafayette

Response

It is true that demand projections are estimated to exceed projections in the growth of population. One of the reasons for this is that the number of people living in each household is projected to decline in the future. Therefore, the number of households in the service area is projected to grow at a faster pace than the general population. The number of households is projected to increase by 22 percent, from 448,000 to 557,000. A significant portion of household water use is for outside water use; primarily irrigation. This water use is not totally related to the number of people in the household but is more affected by the lot size and climatic conditions.

One of the alternatives included in the Water Supply Management Plan would be accelerating the installation of ultra low flush toilets by: State legislation requiring ultra low flush in new construction, city or county ordinances requiring their installation on resale, and a phased program of replacement over twenty years. (See Chapter III for a more complete discussion.) The amounts resulting from a universal mandatory program cannot be predicted until more experience is available.

Comment

Shouldn't the demand projections include more annexations?

City of Lafayette

Response

EBMUD's water demand projections include build out on areas within the District's ultimate service boundary. There are also areas outside the ultimate service boundary which have a potential for annexation but are not included in the demand projections. Table III-7 of the Urban Water Management Plan identifies some of these areas outside the EBMUD ultimate boundary that have inquired about water service. Earlier in 1988, the District adopted a moratorium on annexations outside the ultimate boundary.

Comment

We suggest that EBMUD revise their growth assumptions to reflect the City of San Ramon's projections.

City of San Ramon

Response

EBMUD's water demand projections are based on socio-economic data obtained from ABAG, the Department of Finance, and consultations with the cities and counties within the EBMUD service area. The San Ramon Valley area was covered by a special EBMUD study in 1984 for the Environmental Impact Report prepared for the major facilities projects in the distribution system. In that study, specific recent development activity in the area was identified which were not accounted for in ABAG's projections. (This is described in detail in the Urban Water Management Plan.) For the City of San Ramon, EBMUD's projections include only the area within EBMUD's ultimate boundary, and not the proposed extensions of the City's Sphere of Influence into either the Dougherty Valley or the west.

Comment

The document does not show how the projections were created. More detailed discussion is needed on your creation of high and low population projections. Suggest presenting both year 2000 and 2020 data. Who is the external demand referred to on page 3-7 and what are your commitments to them? Describe factors for variance.

Gary Binger, Association of Bay Area Governments
David Fullerton, Sierra Club Water Committee
Robert H. McClain

Response

EBMUD's water demand projections are described in detail in the Urban Water Management Plan. The high population projections are based on socio-economic data from ABAG, the Department of Finance, and consultations with the cities and counties within the EBMUD service area, including information contained in the 1984 San Ramon Valley Master Plan EIR. For the low projection it was assumed that the growth projected in the high projection occurred at a slower rate; i.e., the year 2000 population did not occur until the year 2020. Figure III-25 indicates the population by city for the service area for 1985 and a projection for the year 2000. As indicated in the figure, this data is based on ABAG projections which at the time did not extend beyond the year 2005. Therefore, it was not possible to show a 2020 population projection broken down by city. Total population within the service area is expected to be 1.09 million to 1.18 million in the year 2000 and 1.12 million to 1.24 million in the year 2020. This is indicated in Table III-4 of the Urban Water Management Plan.

In developing the water demand projections, a variance of +10 MGD was included and was added to the planning projection to account for annual fluctuations in demand due to changing weather patterns, economic conditions, and other factors that cause the demand to vary from year to year. This is described in more detail in Chapter III of the Technical Report and also in Chapter III of the Urban Water Management Plan.

Comment

There were several questions and comments regarding the source of the demand projections.

Peter Vorster
David Fullerton, Sierra Club, Water Committee
Ken Kofman, Director, EBMUD
James Sayre
Clark Frentzen
John Woodbury, EBMUD Public Hearing
Walter Hale

Response

The EIR assumed that new development will continue between now and 2020, but is limited by the General Plans of the 20 cities and two counties and EBMUD's ultimate boundary. EBMUD's 1985 water demand projections included not only data from ABAG and the Department of Finance but also consultations with the cities and counties within the EBMUD service area. These consultations provided the most current and up-to-date information then available on anticipated development within those areas.

Comment

Why were the demand projections made in the early 1970's so excessively high and why should there be more confidence in the demand projections being made today?

Peter Vorster

Response

The increase in demand from 220 MGD in 1987 to 270 MGD in 2020 is a compound annual growth rate of 1.5%; modest growth is being assumed by the land use planning agencies. Population and other socio-economic projections made in the 1970's were higher than the projections being made today. This is the primary reason for a decline in the 1985 water demand projections. Many of the District's larger customers have permanently reduced their water use (following the 1976-77 drought), this increased efficiency is also incorporated in the recent projections. There are no guarantees, however, that the current demand projections are any more accurate than the projections made in the early 1970s. This is why the District revises the demand projections every few years; to make the best use of currently available information and data on demographic and water use.

Comment

Why are the demand projections in the WSMP different from the Urban Water Management Plan?

Robert Mowris, Public Hearing
David Fullerton, Sierra Club, Public Hearing
Donald Forman
Ken Kofman, Director, EBMUD
Helen Burke, Director, EBMUD

Response

The water demand projections contained in the Urban Water Management Plan and the Water Supply Management Program are identical. The only difference is the water savings projected from water conservation and water reclamation activities. The Water Supply Management Program proposes to implement measures that have known savings and try (through pilot programs) those measures for which there is little data. Projections to plan for the future Water Supply of EBMUD customers is based on those measures that have data available.

Comment

Why is the unaccounted for water percentage expected to climb from the current 7.3 percent to 12.3 percent in 2020?

Robert H. McClain

Response

As indicated in Table III-27 of the Technical Report, unaccounted for water use is projected to be between 20 to 24 MGD in the year 2020 which is approximately 8 percent of the total demand before accounting for conservation, reclamation, and variances. Unaccounted-for-water represents about 8 percent of present demand, and is expected to continue at that same rate.

Comment

Water use: Please provide supporting data on the statement that "sixty-seven percent of all water use is inside use".

Ken Kofman, Director, EBMUD

Response

Since the District does not separately meter inside and outside water use, the figures cited are estimates based on an examination of winter water use (when overall water use is at a minimum because outdoor water use is at a minimum) and average water use for the entire year. It is assumed that the water use occurring during the winter months of January and February is essentially inside water use and that the additional water use is outside water use.

Comment

Figure III-25: Apparently some errors in this table. For instance it shows no population for Alamo-Blackhawk in year 2000 and a decrease in Danville population from 32,100 to 17,500 by the year 2000. Also, some cities show a decline in population.

Ken Kofman, Director, EBMUD

Response

This table is in error and has been corrected in the revised draft. There are some cities within the service area that are projected to decline in population between 1985 and the year 2000. These cities include Berkeley, Piedmont, San Lorenzo, El Cerrito, Lafayette, Orinda, and San Pablo.

Comment

Water demand projections: Population figures are just shown for year 2000. What is the population figure of 2020? Why is it assumed that the new 98,000 homes would average approximately 387 gallons per day? If present average use is 400 gpd and increased water conservation is supposed to reduce that figure by 10 percent, the average use should be no more than 360 gpd.

Ken Kofman, Director, EBMUD

Response

Population figures for the year 2020 are not shown in Table III-25 because ABAG projections were not available to the year 2020. However, Table III-4 of the Urban Water Management Plan does illustrate 2020 population for the service area divided into SCC Zones. These projections are primarily based on Department of Finance data which extend to year 2020. Single family residential water use rates for new housing ranged from 300 to 350 gallons per household per day, depending on the location within the service area (see Figure III-28 of the Technical Report). These water use rates were developed for planning improvements in the distribution system and are influenced by climate and lot size.

Comment

Single family residential water use: Why, in every region, is use by new customers assumed to be higher than use by existing customers? Please provide data on which conclusions on water use was made. Calculate the water consumption on new homes assuming the landscape guidelines remain in effect after the drought.

Ken Kofman, Director, EBMUD

Response

For new households the demand projections assume per household water use figures consistent with those used for planning of new facilities in the distribution system. Per-household water use for new housing units has increased, on the average, due to larger lot sizes and other factors. This is described in more detail in Chapter III of the Urban Water Management Plan.

If the District's landscape guidelines remain in effect after the drought, such that the guidelines would be a mandatory requirement on all new housing, an estimated 3 MGD of water could be saved by the year 2020 as a result of reduced outdoor water use. Per household water use for single family households would range from 280 to 600 gallons per household per day. This assumes a 25 percent reduction in outdoor use by new residential housing between 1990 and the year 2020.

Comment

Page 10-1 of EIR, Water supply and urban growth: The discussion and charts do not specifically show that water consumption will rise. Rather one needs to refer to the Technical Report for that data. The basic assumptions about per capita use which drives the 270 mgd figure should be added to the draft EIR.

Ken Kofman, Director, EBMUD
Robert Adams, City of Lafayette

Response

Chapter 10 of the EIR discusses the population and employment projections that underlie the water demand projections and what they mean in terms of quality of life. The discussion of water demand itself is contained in Chapter 3 of the EIR. It has been expanded to better explain the basis for the demand projections.

Comment

The EIR does not evaluate how much water storage capacity will be used for growth and the ramifications of allocating additional water storage capacity.

Gary Binger, Association of Bay Area Governments

Response

A new terminal reservoir would have several purposes as noted in Chapter 3 of the EIR, with the capacity needed for each purpose allocated to both existing and new customers. Existing customers would benefit from a significant improvement in the security of the Mokelumne River supply in the event of an outage caused by earthquake damage in the Delta. The projected increase in demand to the year 2020 caused by new customers would be accommodated for the same security and also to avoid excessive rationing in time of drought.

In most years, the Mokelumne supply is more than adequate to meet the projected demand. It is estimated that 57 percent of the benefits of the new terminal reservoir accrue to new customers, as described in Chapter 5 of the Technical Report. The ramifications of the provision of additional water supply capacity are discussed in Chapter 10 of the EIR.

ISSUE 5: SERVICE AREA

Comment

The lack of detail in EBMUD's service area maps is a real problem in identifying communities which fall into EBMUD service area.

City of San Ramon

Response

A revised map identifying the details in the San Ramon area is included as Figure III-27A.

Comment

The DEIR does not tell us how many acres have been annexed, how many services added since 1970.

Al Silbert

Response

Since 1970, 26,700 acres has been annexed into the District's service area. Over 15,000 acres of these lands is watershed and park land. Metered water service connections increased by 16 percent during the same period.

NEED FOR STORAGE

ISSUE 6: NEED FOR ADDITIONAL STORAGE

Comment

There were several comments expressing the need for additional reservoir storage to ensure the availability of water supplies during dry years.

Carolyn and Ned Herrington
C. E. McClure
Alameda County Taxpayer Association
Anita Pender
John Cassell
John and Rachel Caskell
John Tulley
Gloria Fisher
Helen Unruh
Helen Richards
Howard Kerr
Judy Chavez
Michael Cameron
Katherine Schmidt
Richard Young
Ora Huth, League of Women Voters
John S. Lagarias
Donn Dears, EBMUD Public Meeting
William Dabel, Mayor of Orinda
Carolyn and Ned Herrington
Herb Crowle
Mary M. Smith
Jerry Meral, EBMUD Public Hearing

Response

The District's Water Supply Management Program (WSMP) addresses the need to provide additional terminal reservoir storage to protect against water shortages during droughts and outages. Water would be stored during wet years for use either during dry years or aqueduct outages.

Comment

There were several questions regarding the basis for 145,000 acre-feet of storage.

Moraga Citizen, Moraga Public Hearing

Al Silbert

Helen Burke, Director, EBMUD

David Fullerton, Sierra Club, Water Committee

Karen Garrison, EBMUD Public Hearing

James Blickenstaff, Sierra Club

Forest Smith

Response

Refer to "Conclusions on the Most Feasible Program Alternatives" section in Chapter V of the Technical Report.

Comment

How does EBMUD's existing and proposed terminal storage space compare to other major urban water agencies?

Peter Vorster

Response

<u>UTILITY</u>	AVAILABLE STORAGE <u>STORAGE NEAR SERVICE AREA</u> (acre-feet)	<u>DAYS OF STORAGE AT AVERAGE DEMAND</u> (days)
Alameda County Water District	Approximately 17,600 (plus groundwater basin)	143
Contra Costa Water District	2,900	3
EBMUD	155,000	238
Marin Municipal Water District	81,000	860
North Marin County Water District	4,300	161
Sacramento Water Water Department	0 (Unlimited supply The American River and Sacramento River)	0
San Francisco Water Department	238,800 (Crystal Springs, Pilarcitos, San Andreas, Calaveras, San Antonio)	263
Santa Clara Municipal Water Department	Approximately 221 (plus groundwater basin)	3
Santa Clara Valley Water District	173,000	0 (Wholesaler)

Comment

If this 145,000 acre-foot reservoir is needed for outages or droughts why is it not in an area that will serve the largest area of the District (Central and Eastern Contra Costa)?

Hazel and Paul Shewell

Response

The location of Buckhorn Reservoir is within the center of EBMUD, therefore, the reservoir would have the flexibility of delivering water to all the District's filter plants without pumping. All parts of the District's service area would benefit from the reservoir.

Comment

Alternative to reduce water shortages: Under water banking, the figures of 95,000 acre feet is used where in other parts of the document 150,000 acre feet is used. Why the difference? Is the additional 55,000 the amount estimated for back-up in case of a Delta outage?

Ken Kofman, Director, EBMUD

Response

Generally true, but please refer to the "Water Banking--Additional Terminal Storage" section of Chapter V of the Technical Report for additional details.

Comment

WSMP ignores the carry-over effects of drought on long-term conservation.

David Fullerton, Sierra Club Bay Chapter, Water Committee

Response

The carry-over effects of drought on long-term water conservation were observed in 1977 and were recognized in the WSMP. It is illustrated in Figure III-1 of the Technical Report. The water demand projections were based on socioeconomic data as well as water use patterns. Any carry-over effects that might be presented have been incorporated in the water use patterns.

Comment

Page II-2 of Technical Report: What action is proposed if current local water supply tunnels are damaged by earthquakes? Will water from either of the three proposed reservoirs be available if these tunnels are disrupted?

Ken Kofman, Director, EBMUD

Response

The tunnels (San Pablo, Claremont, and Upper San Leandro) would be returned to service as soon as possible. Water from Buckhorn or Los Vaqueros is the easiest to distribute throughout the District because of the direct tie-ins to the aqueducts. Water stored in Pinole Reservoir would be more difficult to use since the reservoir is not connected directly to the aqueducts. Please refer to section "Local Water Supply System", Chapter II, of the Technical Report for additional details.

Comment

According to "State Water Resources Control Board, Exhibit 586266", additional terminal storage was considered not feasible.

Andrew Cohen, EBMUD Public Hearing

Response

Please refer to the "Alternatives" section of the Technical Report.

Comment

Buckhorn's 200 day supply won't solve the drought problem anyway.

Edgar Mendelsohn

Response

In combination with EBMUD's existing terminal reservoir storage, Buckhorn would provide 396 days of supply at demands of 270 MGD with a 25 percent reduction in demand during the most severe drought in history.

Comment

If Buckhorn Reservoir were used to increase local yield, would it still provide the specified amounts of shortage and security supply?

Peter Vorster

Response

The Buckhorn Reservoir watershed lies within the District's existing Upper San Leandro Reservoir watershed, so that there would be no net increase in local yield in the system. However, the water stored in the Buckhorn Reservoir would meet the District's 2020 demands and still provide drought and security reserves.

Comment

Page 2-1 of EIR: Terminal Storage. Sentence "The multiple have multiple purposes" makes no sense.

Ken Kofman, Director, EBMUD

Response

The sentence should read "The reservoirs have multiple purposes."

Comments

The D.E.I.R. is deficient because it does not provide analysis of water delivered to Brentwood and CCWD.

Al Silbert

If EBMUD is short of water, how come it continues to sell large amounts to Brentwood, Port Costa, CCWD and others?

Al Silbert, Moraga Public Hearing

Response

EBMUD has no commitment to deliver water to these agencies during shortages. They are supplied only when there is surplus water available to EBMUD; hence, the WSMP is based on the District policy that during such shortage or emergency conditions, no water will be delivered to Brentwood, CCWD and such other external users.

Comment

What would prevent Buckhorn from being used as part of the regular supply (as opposed to standby for droughts and outages) if growth occurred more than projected?

Questioner, EBMUD Public Meeting

Response

Current system demand is 220 MGD and is projected to increase to 270 MGD in 2020. Should the demand increase to levels higher than 270 MGD whether before or after 2020, terminal storage will again become insufficient to provide security against an extended outage of water supply delivery system and additional facilities would have to be constructed.

Comment

How does EBMUD storage compare to its storage during the 1977 drought?

Questioner, EBMUD Public Meeting

Response

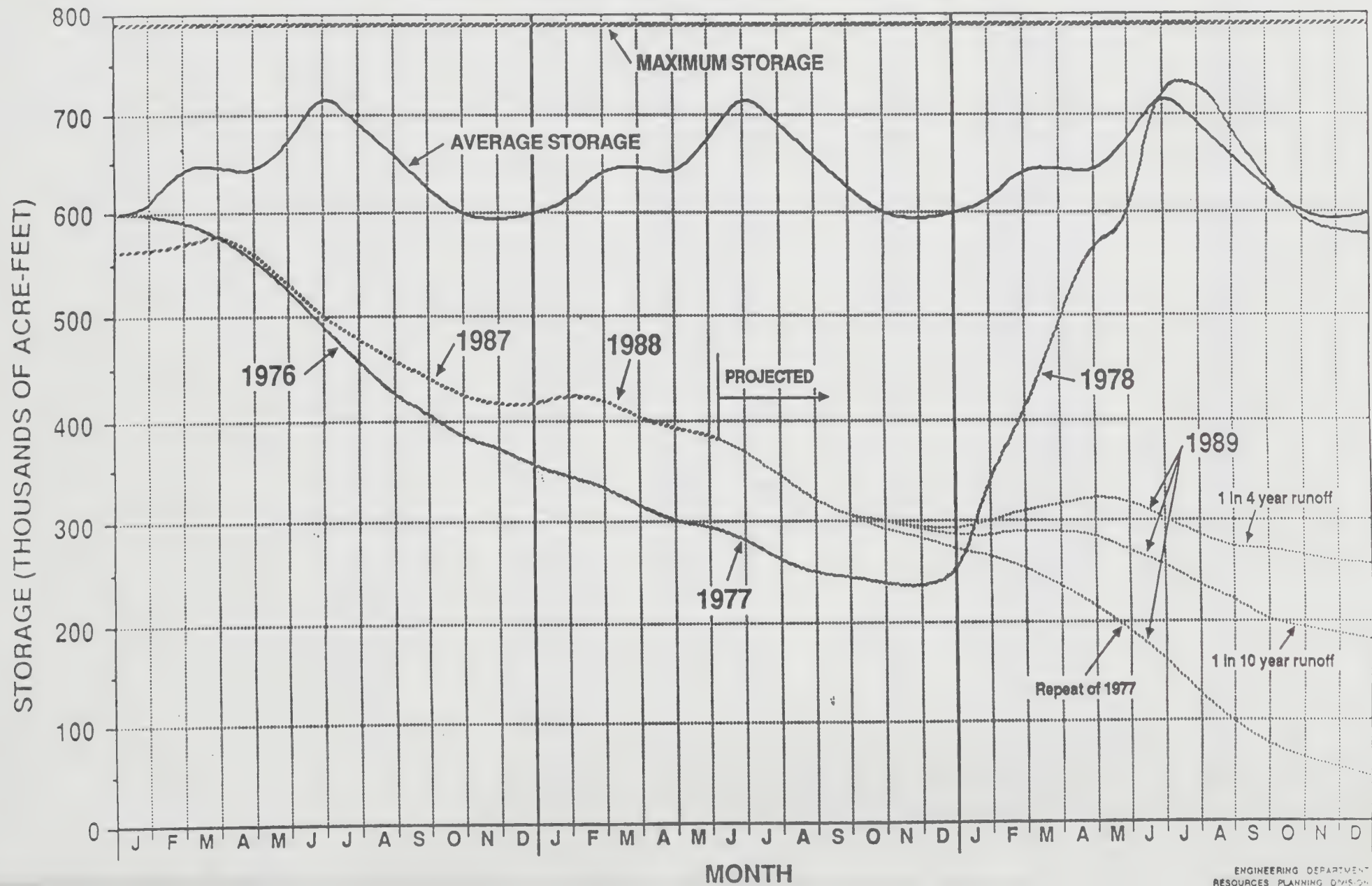
The attached graph, prepared by the District on June 6, 1988 for a recent hearing before the State Water Resources Control Board, compares combined storage in all District reservoirs during the 1976-77 drought, during the current drought, and on average. As can be seen, comparing September 30, 1988 storage to that of September 30, 1977, indicates that about 61,000 acre-feet of more water is projected to be in storage in 1988 than was the case in 1977.

Because the terminal reservoirs are kept relatively full even during droughts with water imported from Pardee Reservoir, terminal storage alone is not a meaningful indicator of water supply conditions. Terminal storage will not decline noticeably until Pardee Reservoir is nearly empty (or unless flow in the aqueducts is interrupted for any reason).

TOTAL STORAGE

PARDEE, CAMANCHE, AND EAST BAY RESERVOIRS

JAN 1976 TO DEC 1978 AND JAN 1987 TO DEC 1989



ISSUE 7: RISK OF AQUEDUCT OUTAGE IN THE DELTA

Comment

There has never been an earthquake-caused interruption of water supply at EBMUD.

James Blickenstaff

Response

No earthquake-induced failure has occurred in EBMUD's system during the 60 years the Mokelumne Aqueducts have been in service. However, seismic experts, Professors Bruce A. Bolt and H. Bolten Seed, find the lack of high or very high ground shaking during this period unusual. The period between 1906 and 1979 has been seismically quiet compared to 1830 to 1906. The current lack of seismic activity in the Delta does not guarantee other seismic events will not occur in the future. In addition, foundation conditions in the Delta worsen each year, increasing the risk of damage from smaller earthquakes.

The potential risk of damage to the aqueducts and the levees was demonstrated in the 1980 Upper and Lower Jones Tract flooding. The 1980 flood accelerated EBMUD studies and investigations of the types of potential aqueduct failures and associated levels of risks from various magnitude earthquakes and levee failures caused by floods. Damage to the aqueducts in the Delta by a single Delta island flood can result in a 4-month outage while a moderately strong earthquake can cause a 17-month outage of the Mokelumne Aqueducts. Details of the potential damage and outage times are discussed in Chapter II of the Technical Report.

Comments

If the potential damage from earthquake and flood is so severe, why not fix the aqueducts in the Delta or give their replacement a high priority?

Audrey Sayre
Frank Delfino
Peter Vorster
Robert H. McClain
Ken Kofman, Director, EBMUD
Nancy Nadel
David Fullerton, EBMUD Public Hearing

If the Delta is so critical, why are we only spending \$10 million to strengthen the system there?

Frank Delfino

Response

The Water Supply Management Program identified various alternatives to improve the District's water system security including:

- o Provide additional storage during extended outages of the Mokelumne Aqueducts.
- o Rebuild vulnerable sections of the Mokelumne Aqueducts.
- o Repair Delta levees in vulnerable areas crossed by the Mokelumne Aqueducts.

Given the uncertainties of floods, earthquakes, and future Delta conditions and the growing dependence on the Mokelumne system, it is important for the District to develop a comprehensive Water Supply Management Plan that does not rely solely on a single-purpose solution. The Technical Report shows that the cost of a replacement aqueduct as a single solution to Delta flooding and earthquakes would be higher than the costs of a multi-purpose storage reservoir. Costs for aqueduct replacement would range from \$265-\$535 million. That relatively small expenditures (\$10 million) for the improvement of levees at vulnerable locations could improve aqueduct security in the Delta and reduce the severity of aqueduct failure. Studies would be required to determine the most cost effective way of strengthening Delta levees, including possible improvements to the aqueduct foundations.

Replacing the pipeline in the Delta is considered as one of the alternatives in the Water Supply Management Program. However, the cost required to investigate, test, study, design and build a secure aqueduct system through the Delta is estimated to cost \$265 million. It would take several years of field testing and investigation before the District can design a secure aqueduct across the Delta.

The proposed program includes improvements in the Delta to reduce some of the risks. However, the District must also ensure water to its customers to meet present and future needs. A new secure aqueduct would not relieve the shortage problems during a drought.

Comments

Why is the maximum credible earthquake on the Antioch Fault a 6.5 when the largest historic earthquake only a 4.9? A smaller magnitude earthquake would tend to produce smaller accelerations, which would result in an outage of shorter duration than the 13 months used in the Technical Report.

Robert H. McClain

Page 5-43 of EIR: Seismicity: Please elaborate on the Antioch Fault zone.

Ken Kofman, Director, EBMUD

Response

The largest recorded earthquake on the Antioch Fault was 4.9 on the Richter scale, occurring in 1976. The maximum credible earthquake (MCE) on the Antioch Fault is 6.5 on the Richter scale and is the largest predicted earthquake on that fault (Converse, 1981). The MCE is scientifically determined by considering the total length of the fault zone, using fault rupture length, type of fault, fault displacement, historic earthquakes, experience and judgment. The frequency of recurrence for the Antioch MCE is approximately once every 250 years. Smaller earthquakes, like the earthquake in 1976, would occur more frequently. The 1976 earthquake produced no significant damage and was not considered a major seismic event.

Figure II-12 of the Technical Report lists the various levels of earthquake events and the corresponding levels of damage and outage time. The Antioch Fault is the closest active fault in the Delta region. This fault is considered active due to displacement at or near the ground surface in the past 10,000 years. There is limited data indicating ongoing creep movement of the fault. Ground shaking from the Antioch Fault would produce extensive damage to the Mokelumne Aqueducts and is estimated to have an outage time of 17 months. Smaller levels of ground shaking will occur more frequently, but the damage and outage times will be smaller. Given the various threats from the other 11 faults in the Delta, a high level of ground shaking with an outage time of 13 months has been assumed for planning purposes.

Comment

Is the Converse Report and the Jacobs Report available for public review?

Robert H. McClain

Response

All references cited in both the EIR and the Technical Report are available for review at EBMUD's Office of Planning at 2127 Adeline, Oakland.

Comment

Explain the vulnerability of the aqueduct support system?

Robert H. McClain
Ken Kofman, Director, EBMUD

Response

Refer to the "Mokelumne Aqueducts in The Delta" in Chapter II of the Technical Report.

Comment

How do the levee and foundation improvements reduce risk in the Delta?

Robert H. McClain
Ken Kofman, Director, EBMUD

Response

The majority of land in the Delta is below sea level with some surface elevations at least 25 feet below sea level. The Delta islands are continuing to subside at a rate of up to 3 inches per year due to the loss of peat deposits from decay. Current levee maintenance is only a short-term solution to the Delta problem. If subsidence of the Delta islands and levees continue, future levee failures and island flooding may be inevitable.

Both the Technical Report and the EIR discusses the worst case scenario of a levee failure due to very high level ground acceleration (once in 250 years) with an outage time of up to 17 months. However, a low to moderate level of ground acceleration caused by an earthquake on any one of twelve faults, or a high level of ground shaking caused by an earthquake on any one of twelve faults, or a high level of ground shaking caused by an earthquake on the Antioch Fault are more likely events, with recurrence intervals of once in 23 years and once in 83 years, respectively. Given the various risks in the Delta, combined and individual, with greater frequency at lower levels, an outage time of 13 months has been assumed for planning purposes.

Levee reinforcement and pile foundation improvements would reduce, but not eliminate risks by strengthening the levees to resist flooding pressures or by improving the aqueduct/pile cap connections to better resist earthquake. However, neither method provides an adequate solution to the underlying soils problem in the Delta--the loosely packed easily liquifiable sands and silts.

Comment

Page II-8 of Technical Report, DWR's Study: Has there been any follow-up to the 1986 study, particularly that part which "did not determine if sufficient water supplies with adequate water quality would be available if an outage were to occur?" If not, why not?

Ken Kofman, Director, EBMUD

Response

The 1986 DWR study concluded that the possible actions that could be taken in the event of flooding in the Delta included (1) reducing Delta exports, (2) increasing upstream releases, (3) establish interconnections, and (4) repair levees. The quote in the comment was stated in the report only to qualify the extent of the DWR study. The follow-up action on the potential for flooding was the studies that led to the alternative solution discussed in the Technical Report.

Comment

Page II-8 of Technical Report, Aqueduct Support Structure: "Both the elevated and buried portions...are susceptible to damage." What is the length of aqueduct which needs to be replaced to remove this threat? And why does the EIR focus only on the elevated portion and not the susceptible buried parts?

Ken Kofman, Director, EBMUD

Response

The Converse Report (1981) identified over 15 miles (82,000 feet) of buried and elevated aqueduct across the Delta as being susceptible to damage from floods and earthquakes. However, 9 miles of the elevated portion of the aqueducts are more vulnerable to damage. Due to the condition of the pile support structure, the elevated aqueducts are more susceptible to damage as a result of levee failure from earthquakes and floods.

Comments

Why does it take 4-17 months to repair the aqueducts in the Delta?

Golden Gate Audubon Society

How long would it take for an emergency temporary repair?

Nancy Nadel

Stuart L. Somach, McDonough, Holland, & Allen, Attorneys

Peter Vorster

David Fullerton, Sierra Club, Water Committee

Al Silbert

Michael J. Vandeman

Robert H. McClain

Ken Kofman, Director, EBMUD

Patricia Burke, EBMUD Public Hearing

Helen Burke, Director, EBMUD

City of Alameda, Planning Department

James Blickenstaff

V. and E. Gunther

West Contra Costa Gray Panthers

Response

The time to repair the aqueducts in the Delta depends on the severity of the damage: four months is the estimated time to repair aqueducts damaged by flood inundation and the resulting scour; 10 months would be required to repair aqueducts damaged by moderate levels of ground shaking (0.10 to 0.20g); and approximately 17 months would be needed to repair damage from a maximum earthquake on the Antioch Fault (recurrence of once every 250 years).

The time to construct a secure aqueduct across the Delta is estimated to take up to 17 months. Activities requiring major construction time include manufacturing and delivering pipeline, laying and welding pipes, and constructing subaqueous crossings. It will take at least 4 months to manufacture and deliver pipes, 8 months to lay and weld steel pipeline, and 8 months to construct three subaqueous river crossings.

Additional time would be required to prepare contract documents, advertise and award contracts, mobilize equipment, drive piles for a new foundation, form and build concrete pier caps, and test and fill the aqueducts. Some activities can be done concurrently; however, the total construction time is estimated to take 17 months. This estimate assumes construction of 82,000 feet (over 15 miles) of elevated pipeline to replace the existing aqueducts.

The more likely event caused by any one of the 12 active faults in the Delta region will result in an outage of 13 months. A 13-month outage time is used for planning purposes. Outage times are based on emergency repairs needed to restore service. Minimum time would be required to manufacture and deliver pipe, lay and weld pipes from barges, and to construct subaqueous river crossings. Two contractors would work on the pipeline and one contractor would work on the subaqueous crossings.

A 5-day work week with two 8-hour shifts per day is the most realistic and productive work schedule for contractors. It would allow for required equipment and support services while reducing inefficiencies due to fatigue, working in the dark, and equipment breakdown. The District currently stockpiles 1,500 feet of pipe for minor repairs. The pre-purchase of additional pipeline would not lessen the outage time because the time required to prepare contracts and design, and mobilize equipment which would be done at the same time takes longer.

Comment

Where is the Green Valley Fault?

Tom Buckingham

Response

Refer to Figure II-14 of the Technical Report.

Comment

Would there be a coordinated response to prevent salinity intrusion?

Donn Dears, EBMUD Public Meeting
Peter Vorster, EBMUD Public Meeting

Response

Coordination of the U. S. Bureau of Reclamation's Central Valley Project, the State Water Project, and other water agencies to respond to salinity intrusion is probable. Both the Central Valley Project and the State Water Project have, in the past, reduced export and increased upstream releases into the Delta to reduce salinity intrusion during a levee failure. In addition to these efforts, EBMUD provided water to Contra Costa Water District when the 1972 failure of Andrus Island resulted in high salinity at the CCWD Rock Slough intake.

Under State law, the Department of Water Resources would coordinate most actions in the emergency plan under existing law to protect the health and safety of the general public. However, during a major levee failure event in the Delta, sea water intrusion would be so extensive that very little could be done to reduce the salinity.

Comment

What would happen system-wide should there be the Maximum Credible Earthquake on the Hayward Fault? What would happen to Buckhorn?

Questioner, EBMUD Public Meeting

Response

Refer to the "Background" Section of Chapter II of the Technical Report for details on the District's water supply system. Buckhorn Reservoir would be built to resist the maximum credible earthquake whether originating from the Hayward Fault or any other system.

Comment

Why not ask the COE to do an emergency repair estimate? How long would it take the Corps to respond to an outage emergency?

Helen Burke, Director, EBMUD

Response

EBMUD repair estimates have been prepared using the best possible experience and knowledge of independent consultants. While not prepared by the Corps of Engineers, the Corps experiences in such events has been taken into account. The assumption is that the Corps would be heavily involved in restoring Delta facilities. Under the scenarios forecasted by the experts (total collapse of levees and resulting aqueduct failures), vital services would be lost. Both the Corps and the State are assumed to concentrate on restoring service to the commerce of California (shipping lanes) and statewide water supplies and not, as a first priority, providing assistance to EBMUD's water system.

ISSUE 8: NUCLEAR ACCIDENT AT RANCHO SECO

Comment

The consequences of a nuclear accident at Rancho Seco were not addressed.

Leonard Conly, Nuclear-Free Berkeley Committee.

Response

A nuclear accident at Rancho Seco is not expected to significantly impact the proposed project.

The District has thoroughly studied such hazards in response to Federal Energy Regulatory Commission requirements. (A comprehensive Emergency Action Plan is available for inspection at the District's Office of Planning.) The Rancho Seco facilities are 15 miles from Pardee. Generally, the prevailing winds tend to carry radiation away from the District's facilities, however, contingency plans are in place to deal with radiological contamination should it occur.

ISSUE 9: DECREASING SUPPLY AVAILABILITY

Comment

Drops in the Mokelumne yield from the current 252 mgd to 225 mgd by the year 2020 can be counteracted by (1) reducing Mokelumne River seepage losses through conjunctive use, (2) contingency contracts with agricultural water agencies, and (3) Delta to Camanche Reservoir pumping.

David Fullerton, Sierra Club, Water Committee

Response

If farmers who normally use the Mokelumne River for their irrigation water could be encouraged to use groundwater pumped from deep wells during droughts, downstream flows could be maintained during dry years with smaller releases from Camanche Reservoir. Assuming this doesn't create instream flow or public trust issues below Camanche Dam, correspondingly more water could be diverted to the District's East Bay service area. (See Chapter III of Technical Report.)

However, the District's efforts so far this summer (1988) to obtain specific commitments from downstream irrigators not to exercise their entitlements have not proven successful.

Comment

If in most years EBMUD can take 325 MGD from the Mokelumne, why is the supply availability only 252 to 222 MGD?

Ken Kofman, Director, EBMUD

Response

Generally, the supply decreases in dry years to inadequate carryover storage. Please refer to the "Availability of Supply" Section in Chapter III of the Technical Report for additional details.

Comment

Policy for water supply availability and deficiency: Assuming Camanche can be supplied with other than Pardee water (such as the Delta pumpback or American river water) what does that do to the firm yield figure and also to the standby storage in case of drought?

Ken Kofman, Director, EBMUD

Response

It now appears that the Delta pumpback option is not acceptable as an emergency measure to the SWRCB (August 18, 1988 Decision) and that the water quality changes resulting in the lower Mokelumne from a Delta pumpback operation are not acceptable in emergencies, so they presumably would not be acceptable in routine periods.

Comment

Page III-38 of Technical Report: Please explain what commitments are reportedly being violated regarding the Mokelumne River flows?

Ken Kofman, Director, EBMUD

Response

The California Sportfishing Protection Alliance filed a complaint with the State Water Resources Control Board on October 23, 1987, alleging that the terms and conditions ordered by that Board in issuing water rights to EBMUD for Camanche Dam and Reservoir and Pardee Dam and Reservoir are not protecting and maintaining the fisheries resources and water quality of the Mokelumne River, are not protecting and maintaining the salmon and steelhead trout resources being reared at the Mokelumne River Fish Installation, and did not adequately mitigate for the losses to the pre-project fisheries.

Shortly thereafter (on November 5, 1987) the Department of Fish and Game expressed concern and alarm about large losses of steelhead at the Mokelumne River Hatchery and trout and gamefish in the Mokelumne River below Camanche Dam in October of 1987.

It is the general commitment to protect the fisheries, rather than specific rules or regulations, that EBMUD is being accused of violating.

Comment

Page V-8 of Technical Report: How much Pardee water went to downstream users in the 1976-77 drought?

Ken Kofman, Director, EBMUD

Response

The following tabulation compares inflow to Pardee Reservoir and the corresponding releases to the lower Mokelumne River at Camanche Dam during calendar years 1976, 1977, and 1987:

<u>Year</u>	<u>Inflow to Pardee</u>	<u>Release to the River</u>
1976	186,640 acre feet	159,926 acre feet
1977	144,660 acre feet	127,529 acre feet
1987	263,190 acre feet	173,710 acre feet

Note: Water is not released directly to the lower Mokelumne River from Pardee.

Comment

How will downstream users increase their draw upon the Mokelumne?

Peter Vorster

Response

Downstream diversions from the Mokelumne River are not expected to increase appreciably in future years. Upstream use, on the other hand, is expected to increase as the mountain counties become more populous. As that occurs, inflow to Pardee Reservoir will gradually decline.

ALTERNATIVES

ISSUE 10: NON-STRUCTURAL AND COMBINATIONS OF ALTERNATIVES TO TERMINAL STORAGE

Comment

There were several questions asking why alternatives like water conservation, water reclamation, water marketing and interties with other agencies were not considered.

Marjorie Richman	David Fullerton, Sierra Club
Don Peralta	M. & L. Dressel
Scott Weston	Arthur Burch
Anthony Fisher	Patricia Martin
Kirk Peterson	Professor Bruvold
Paula Hartman	City of San Ramon
Christine Holmstrom	Tom Hodges, EBMUD Public Hearing
Golden Gate Audubon Society	Ken Kofman, Director EBMUD
B. Polt	Rob Wells
Tom Fuller, EBMUD Public Hearing	Clark Frenttzen
Phillip Leveen, EBMUD Public Hearing	Mrs. Hogan
Carl Shanahorn, Moraga Public Hearing	Susan Watson
Peter Vorster	Mr. and Mrs. Osmon
Ora Huth, League of Women Voters	George E. Aiken
Patricia Burke	Maureen Fitzpatrick
Steve Meyers	Ronald Rubenstein
West Contra Costa County Gray Panthers	Steve Miraglia
Paul Boero	
Nancy Nadel	
H. and P. Shewell	
Clark Frentzen	
Donald Forman	
Don Peralta, Contra Costa Supervisors	
Peter Berck, EBMUD Public Hearing	
Arthur Geen, Alameda County Taxpayer Association	
Valle-Riestra	
Nancy Nadel	
Bea Cooley, Friends of the River, EBMUD Public Hearing	
Helen Burke	
Mike Vanderman, EBMUD Public Hearing	
Robert Adams, City of Lafayette, City Manager	
Susan Watson	
Carlos P. Bear	
City of Alameda, Planning Department, Clark Frentzen	
Buckhorn Preservation Council	
Karen Garrison, EBMUD Public Hearing	
Seth Adams, Sierra Club, EBMUD Public Hearing	
Peter Berck, UC Berkeley Resource Economics Department	
Helen Burke, Director EBMUD	

Response

Comment noted. While most of these alternatives have been addressed, the Technical Report and Draft EIR have been substantially revised in response to the comments. (See Chapter V of the revised Technical Report.)

Comment

A permanent water pricing structure should be studied to decrease demand.

What about a permanent block rate structure?

Nancy Nadel, EBMUD, Public Hearing
James Sayre
David Fullerton, Sierra Club, Water Committee
Donald Forman
Ora Huth, League of Women Voters
Robert H. McClain
Patricia Burke, EBMUD Public Hearing
Rob Wells
Helen Burke, Director EBMUD

Response

EBMUD has studied the effects a water pricing structure on customer usage. In 1983, the District imposed a new pricing structure to cover additional pumping costs to communities at higher elevations. Studies were conducted to determine the effect of the new pricing structure on water usage in the community. It was concluded that there was no effect. The generally low price of water, even with significant increase such as the elevation surcharge (up to 50 percent), had no impact on consumption since compared to the utility costs, it is extraordinarily low.

The District is obligated to charge users the cost of providing the service. If water rates are increased to the point where they would impact demand, District revenues could be viewed as excessive and not cost based.

National studies have indicated that except when combined with public perception of a drought, such rate structures have not resulted in reduced water usage. On the other hand, intuitively, one would believe that there is a point at which some impact could be felt. Since EBMUD has an adequate supply in all but drought years, current District policy is to charge an equal amount for every gallon of water (except in elevated areas) and apply a surcharge during times of shortage.

Comment

Why hasn't the purchase or exchange of additional water rights been considered?

Clark Frentzen, P.E.

Robert H. McClain

Peter Berck, EBMUD Public Hearing

Response

It has, see Chapters II, III and V of the Technical Report.

Comment

Why can't EBMUD implement a more aggressive water conservation program like the City of San Jose?

Buckhorn Preservation Council
Scott Weston
West Contra Contra County Gray Panthers
Carlos Bear
Rob Wells
Buckhorn Preservation Council
Mike Vanderman, EBMUD Public Hearing
Robert Mowris, EBMUD Public Hearing
Susan Adam, EBMUD Public Hearing
Jeff Harris, Moraga Public Hearing
Peter Vorster
David Fullerton, Sierra Club, Water Committee
Ora Huth, League of Women Voters
Michael J. Vandeman
Charles Brydon, EBMUD Public Hearing
Ken Kofman, Director EBMUD

Response

The District does have an aggressive water conservation program. The total conservation that will be achieved by this program will be about 7 MGD by the year 2020. District conservation efforts include:

Leak detection and pipeline rehabilitation
Water saving device distribution
Water audits
Landscape consultations
Landscape water use efficiency in new developments

In the Water Supply Management Program other alternatives have been identified which could also be implemented by the Board of Directors. The savings in water conservation would then be higher.

The City of San Jose's Water Conservation, Wastewater Flow Reduction Program was started in July of 1986 and is not expected to be completed until 1991. The largest reduction in the program is expected to come from residential customers which is expected to be approximately 6 MGD which is less than the EBMUD program expects to achieve. Residential customers in San Jose have been and will be receiving free delivery and installation of low-flow showerheads and toilet dams, along with conservation tips to reduce indoor water use.

Projected water savings from the devices is still preliminary. The expected savings was based on the estimation that homes constructed prior to 1978 (when legislation required all new homes to have low-flow showerheads and toilets) do not have any water conservation devices.

It also should be noted that the reason for San Jose's conservation program is different from the District's need for more terminal storage. The purpose of San Jose's program is to delay the expansion of their wastewater treatment

plant. If the goals of their conservation program are not achieved they would have to expand the treatment plant sooner than desired. If the District were to implement a more aggressive conservation program potentially an additional amount of water would be realized. Water conservation would only solve one of the District's objectives - drought; water conservation would not make the system more secure from outage.

Comment

Keep terminal reservoirs as full as possible year round.

V. and E. Gunther
Kirk Peterson
Al Silbert
Helen Burke, Director EBMUD

Response

The reason the District presently does not maintain the reservoirs as full as possible is to provide for seasonal regulation for the system. The flow of the District's Mokelumne River supply is higher in the winter months than the summer months. The demand in the District's service area is higher in the summer months than the winter months. The District uses the terminal reservoirs to regulate the flows with the demands. During the winter months when flows are high in the Mokelumne, water is transported by gravity (and pumped when necessary) through the Mokelumne Aqueducts to the District's terminal reservoirs.

In the summer months when demands are high the District uses water from the terminal reservoirs along with water from the Mokelumne Aqueducts. This minimizes the cost of the pumping and the cost of water to the customer and maintains an operational flexibility for the system.

Comment

I recommend that EBMUD investigate the feasibility of satellite reclamation.

Dana K. Ripley

Response

An element of the Water Supply Management Plan is the implementation of wastewater reclamation projects where practical and economic. It has proved difficult, however, to find markets that can be economically served with reclaimed wastewater in an urban environment. Wastewater is already treated before discharge to San Francisco Bay. The cost of reclamation projects in the vicinity of existing wastewater treatment plants is the incremental cost of treatment beyond that already provided. Satellite reclamation projects are more expensive, and thus less practical because they would bear the complete cost of treatment.

The feasibility of satellite plants is also limited by the stringent health restrictions placed on such facilities by the California Department of Health Services.

Comment

Why not have separate facilities for those east of the hills and serve them larger amounts of lesser quality water, and those west of the hills will receive smaller amounts of higher quality water?

Edgar Mendelsohn

Response

Refer to the "Conclusions Regarding Source" section in Chapter IV of the Technical Report.

Comment

EBMUD should consider a fully implemented landscape irrigation management program and on-site rainwater collection systems for irrigation as part of the water conservation program.

Peter Vorster
Ken Kofman, Director EBMUD

Response

EBMUD's current conservation program includes various landscape irrigation measures such as: landscape consultants, to advise customer on low water use landscaping with native or dry climate plants; demonstration gardens to display the attributes of successful drought-resistant gardens; and landscape rebates to provide incentives for customers to install low water-use landscaping.

In addition to these measures, the District has recently adopted Landscape Water Conservation Guidelines to encourage water conservation in development projects. Important elements of the guidelines are as follows:

- Turf shall be limited to 25 percent of the planted area
- Non-turf areas shall emphasize water conserving plants
- The majority of plants shall require minimal water
- Combined turf and decorative uses of water will be limited to reduce water use and evaporation

On-site rainwater collection systems would not be a feasible alternative. Currently the collection systems are used only in developing nations of the third world as they are not considered a sanitary water source and therefore pose a health threat.

In addition they systems would provide less than one-third of the water required for the average outside demand.

If the roof the house was used as the collection area (assuming a 1,500 square foot home and an average annual rainfall of 20 inches per year) 19,000 gallons would be collected in one year. Estimated average outside water use within the District is 62,500 gallons per year.

Comment

How does the likelihood of rationing or decreased water quality relate to alternative water supply management policies?

Gary Binger, Association of Bay Area Governments

Response

A decrease in storage, conservation, or reclamation would result in an increase in rationing during a drought. Under these circumstances, the only alternative to severe rationing would be used lower quality Delta water. The greater the shortage risk, the more likely the use of low quality, saline water with accompanying health risks and taste and odor problems.

Comment

Try a toilet replacement pilot program and see.

Jerry Meral, EBMUD Public Hearing

Ken Kofman, Director EBMUD

Response

Recent but limited experience in Monterey County has shown that the ultra low flow toilets may have promise. The County's requirement is that toilets be replaced at time of house sale. Technical concerns has been raised about reduced sewer flows if flat lying area are retrofitted. Studies will be required to see if universal installation of ultra low flush toilets can be accommodated by building plumbing and sewer lines.

One of the alternatives evaluated in the Water Supply Management Plan is accelerating the installation of ultra low flush toilets by: State legislation requiring ultra low flush in new construction, city or county ordinances requiring their installation on resale, and a phased program of replacement over twenty years with various levels of public subsidy. Other options are also possible. The range of savings could be from as low as less than a million gallons a day to as high as 14 million gallons per day. But this higher amount resulting from a universal mandatory program cannot be relied upon until more experience is available. (See Chapter III of the Technical Report.)

Comment

EBMUD should consider the use of the 17.5 KAF of dead storage in its terminal reservoirs.

David Fullerton, Sierra Club, Water Committee
Robert H. McClain
Helen Burke, Director EBMUD

Response

The 17.5 TAF of dead storage is located below the lowest outlet gates of the outlet structures in the various terminal reservoirs. The dead storage volume is small in comparison with the total storage of the system (17.5 TAF versus 800 TAF). There are basically two reasons why the District does not consider the use of this water as a supply for the customers.

One purpose of the dead storage area is to settle out the heavy metals, organic solids and other suspended solids of the water in the terminal reservoirs. Even though the District controls most of the watershed around its terminal reservoirs some of the areas around the terminal reservoirs are developed without county roads. A lot of the land is used for grazing by cattle. It is important that any suspended solids in this water be settled out before the treatment plants. Although this water can probably be treated there may be higher concentrations of heavy metals and possibly taste and odor problems.

Secondly, pumps would be required to access this dead storage. Inlet works and piping would be required to access this water. Also, because of the potential quality problems, it would be important to design, construct, and operate the inlet works such that the sediments within would not be agitated.

Comment

EBMUD should consider paying for lost landscaping or providing "landscape insurance" during droughts or outages.

Robert H. McClain

Response

Providing "landscape insurance" would not provide for adequate supplies of water during an extended outage. If the aqueducts were out of service for 13 months with the present terminal storage, the conditions would be more severe than just lost landscaping. With shortage of up to 69 percent health and safety may be jeopardized.

In addition, landscape insurance would not guard against impacts to the landscape industry and other commercial and industrial customers. Figures indicate that during the 1977 drought landscaping firms lost as much as 50 percent of their business.

Comment

Should 120-day standby policy be altered? What happens if it goes to 180 days? To 90 days?

Ken Kofman, Director, EBMUD

Response

EBMUD currently tries to maintain a minimum of 120 days of standby supply. The 120 days was arrived by estimating the length of a local aqueduct outage and is also required as standby in the event of a third year drought. The local aqueducts that are subject to damage are the Walnut Creek, Pleasant Hill, Lafayette, San Pablo and Upper San Leandro tunnels.

The proposed WSMP elements are to increase the security (standby) time from 120 days to 13 months. Even during droughts, the proposed storage facilities would be operated to maintain a minimum security reserve of 120 days.

It would not be advisable to shorten the standby time of 90 days. This would shorten the level of safety the District presently maintains in its system. As identified in responses made in Issue 6, other districts in the Bay Area maintain varying amounts of standby storage. San Francisco presently maintains 263 days of standby while CCWD maintains only 3 days. CCWD is proposing Los Vaqueros Reservoirs which would increase its standby supply and improve its water quality problems.

Comment

Water conservation: The use of short-term water conservation through rationing in event of a disaster needs to be included in the policy decisions which the EBMUD board should determine. I presume "disaster" is not intended to include a drought situation.

Ken Kofman, Director, EBMUD

Response

Present District policy is that customers shall not experience more severe rationing than in the 1977 drought (39 percent). Increased efficiency of water use since the 1977 drought means that a rationing program today to achieve a 39 percent reduction would cause a much greater hardship than it did in 1977. For that reason the Water Supply Management Program is proposing that a 25 percent rationing limit be adopted. The draft WSMP also proposes that rationing be limited to no more than 25% during an aqueduct outage. Chapter II of the Technical Report displays the rationing percentages required for different durations of outages.

Comments

Groundwater Resources: Did the 1986 Todd report cover the entire EBMUD area? Was the report done at the behest of EBMUD? Did it discuss the potential of well water for irrigation purposes or individual homes and business parks? Please elaborate on the Todd report.

Ken Kofman, Director, EBMUD

Alternatives for improving security: Groundwater resources, does that include encouraging customers to make use of existing wells for irrigation purposes?

Ken Kofman, Director, EBMUD

Page 7-6 of EIR (last full paragraph): Why is there no mention of encouraging the use of groundwater as a supply-side activity?

Ken Kofman, Director, EBMUD

Response

The 1986 Todd report was prepared to present a preliminary assessment of groundwater resources to supplement EBMUD's Mokelumne River supply. The main conclusions of the study were as follows:

- o The southern East Bay Plain and the San Ramon Valley groundwater basins are the most promising for potential municipal development.
- o These two basins were once used more extensively for drinking water supply than today. Current supplies are greater in quantity and superior in quality providing a better alternative to groundwater for municipal water supplies.
- o The potential for local yield from these two basins is estimated to be on the order of 1 to 2 MGD.
- o Sodium levels in the two basins are between 34 and 100 mg/l, compared to 2 mg/l in the District's Mokelumne supply.
- o The two groundwater basins underlie urban areas and are subject to potential contamination by toxic and carcinogenic chemicals.
- o The Todd report identified only the two basins as potential basins for development. The other basins in the service area were identified as having poor quality, minimal yield, or high contamination potential. (These low yield conditions are especially apparent during dry years, in 1988 a number of consumers have come to EBMUD in search of a high quality supply to replace their wells.)

EBMUD discusses its residential well water augmentation program in the "Water Conservation Alternatives" section in Chapter III of the Technical Report. It is estimated that by the year 2020 an additional water savings would be experienced as a result of this program. This savings is due to additional wells being drilled based upon a District-funded program of installation,

testing and maintenance of backflow prevention devices. With District funding of the program, it is estimated that twice as many new wells would be installed than for a program which is funded by individual well owners.

Comment

Additional water conservation program: If base case to achieve 7 MGD by year 2020 will cost \$264,000 per year, and an alternative conservation program to achieve an additional 5.1 MGD will just be an additional \$296,000, it appears the additional water savings would be very cost-effective.

Ken Kofman, Director, EBMUD

Response

The base case conservation program will achieve only 4 MGD and the additional conservation program will achieve only 3 MGD. The base case conservation program is presently being implemented. The alternative program is recommended as part of the Water Supply Management Program. The earlier UWMP and WSMP reports only showed the EBMUD costs to implement water conservation measures, not total consumer costs. This shortcoming has been corrected in the Revised Draft EIR and Technical Report.

Comment

EBMUD wastewater department activities: Can the 1 mgd tertiary process water plant be expanded and is there a nearby location where the water can be used (such as washing out the I/I storm drain basin)?

Ken Kofman, Director, EBMUD

Response

Effluent from the Process Water Plant (PWP) will be used to washdown the wet weather storage basin located at the main treatment plant. The PWP has storage and sufficient capacity to supply up to 70 percent of the water use requirement. The remaining demand will be made up from the potable water supply.

An expansion of the PWP capacity is not justified at this time, because the current capacity is sufficient for in-house use and the requirement for basin cleanout is infrequent (up to a maximum of 12 times per year).

Comment

Water saving device distribution: How often does the program need to be redone in order to insure that toilet dams and low flow shower heads are still in use? Is there need for a more permanent type of toilet dam?

Ken Kofman, Director, EBMUD

Response

Monterey County and the City of San Jose are two jurisdictions that have recently enacted aggressive water conservation programs. Both of these jurisdictions have had their program operating for less than a couple of years so it is too early to develop any information on continued customer satisfaction and the resultant water savings. It must be expected that some customers will remove the devices because of customer dissatisfaction.

In 1980 a Residential Water Use Survey was conducted for EBMUD, the survey determined that conservation practices by EBMUD customers had decreased notably since the 1977 drought.

In terms of water saving devices, 64 percent of customers used toilet conservation devices in 1977, but only 42 percent of customers used them in 1980. Roughly a 30 percent decrease occurred in just 3 years. Decreases in other conservation practices ranged from 14 to 80 percent. The survey indicated that when public perception of a water shortage is high, customers actively conserve water. However, once the emergency has ended, customers' response to water conservation also decreases.

The District is investigating the use of ultra-low flush toilets as permanent water saving devices. Please refer to Technical Report, Chapter III.

Comment

Landscape consultations: Policy question whether consultations should be an automatic part of a request for water service and/or a request to city/county for building permit.

Ken Kofman, Director, EBMUD

Response

The majority of the cities served by the District have adopted landscape guidelines. Each City may wish to employ different measures.

Comments

Potential Reclamation Projects: Figures III-33 and written material should be expanded to include other areas which were the subject of the late 1970's report and in specific Alameda Golf Course and landscaped areas which are near existing and proposed reclamation projects.

Ken Kofman, Director, EBMUD

Page 3-12 of EIR. Water reclamation: Add Alameda Golf Course to potential water reclamation projects.

Ken Kofman, Director, EBMUD

TWA reclamation project: How does project's estimated cost compare on a per acre-foot with the building of a new reservoir?

Ken Kofman, Director, EBMUD

Page 8-1 of EIR. Water reclamation: Why no mention of the potential of irrigating landscaping along the reclamation project pipe path?

Ken Kofman, Director, EBMUD

Response

The Technical Report and DEIR have been revised to include these proposed projects.

Comment

San Ramon Valley: The reference to a dual water system needs to be expanded and the cost-benefits outlined.

Ken Kofman, Director, EBMUD

Response

District studies of reclaimed wastewater use indicate there would be a greater degree of feasibility for dual water systems if they had been constructed prior to development in the San Ramon Valley. Unfortunately, principal areas of potential use such as golf courses median strips and parks are far apart. In addition, dual water system use is seasonal and the health department is increasing restrictions on the use of reclaimed wastewater near places where people could come into regular contact with the wastewater. See the revised Technical Report and DEIR for projects being implemented by the District which are essentially dual systems for irrigation and industrial purposes. Cost of dual systems are generally estimated in the San Ramon Valley at \$1,000 per acre foot as compared to the current cost of water supply at around \$300 an acre foot.

A more effective approach is to provide for more efficient water use. Dual water systems are in operation in only one area in California, the Irvine Ranch Water District, and are planned for some developments adjacent to wastewater treatment plants (Los Galinas Valley - Marin County) such applications will continue to be evaluated by EBMUD on a case-by-case basis.

Comment

Interties: While it is true EBMUD may be able to take Delta water instead of going through an intertie with CCWD, wouldn't such an intertie enable EBMUD to deliver Delta water directly rather than having to put it into the terminal reservoirs?

Ken Kofman, Director, EBMUD

Response

The source of Delta water, whether directly from the Delta or through an intertie with CCWD, does not affect EBMUD's ability to deliver that water to EBMUD's direct filtration plants or the terminal reservoirs. The impacts of Delta water when blended at the direct filtration plants or in the terminal reservoirs are discussed in Chapter IV of the Technical Report.

The costs for this alternative are presented in the alternative analysis. This alternative would be unusable during an aqueduct outage as a result of levee failures in the Delta. The levee failure would probably make CCWD's water supply unusable as was demonstrated in the 1972 Andrus Island Flood. In the event of a drought the water quality of CCWD's would be significantly lower than other times.

Comments

Water conservation: Estimates of water savings appear to be understated. What is impact of new landscape guidelines regarding demand and theoretical savings?

Ken Kofman, Director, EBMUD

Water Conservation base case: In both landscape consultations and landscape water use efficiency, it appears essential to know what estimated additional savings might be by year 2020 in order to know what impact this might have on the need and size of additional terminal storage.

Ken Kofman, Director, EBMUD

Response

Landscape consultations are presently being made on a regular basis by a recently enlarged District staff. District personnel will assist customers that are planning to install new landscaping or replace existing landscaping. Recommendations made by the District cannot be required of existing customers so expected water savings cannot be relied upon. (See Technical Report, Chapter III.)

Comment

The water conservation component of the proposed program is a significant and thorough effort we commend.

U.S. Department of the Interior, Bureau of Reclamation (USBR)

Response

Comment noted.

Comment

Interties with other agencies: Does San Francisco have to meet downstream rights? If so, could EBMUD, through water marketing, satisfy these downstream right holders and in turn be able to obtain significant amounts of Hetch Hetchy water?

Ken Kofman, Director, EBMUD

Response

Potential interties between San Francisco systems and EBMUD's system are discussed in Chapters II, III and V of the Technical Report. The potential benefits and problems associated with EBMUD's purchase of agricultural water rights or entitlements on the Tuolumne River are similar to those being experienced on the Mokelumne River as discussed in response to comments on Issue 9.

It is unlikely that EBMUD could reap the benefits of a marketing scheme on the Tuolumne as such a program would first be utilized by San Francisco as the City and County of San Francisco have considered expansion of their facilities to meet the growing demands on the peninsula and South Bay for some time. In addition, the City and County of San Francisco are also experiencing a drought emergency with shortages exceeding those of EBMUD.

Comment

Theoretical measures: What would be the cost of an expanded leak detection program and what are the cost-benefit projections?

Ken Kofman, Director, EBMUD

Response

The District operates two full-time advanced technology leak detection teams. The leak detection program focuses on rehabilitating old pipes and has recently been expanded from 7.5 miles per year to 9.0 miles per year. The District has been spending \$6.4 million per year to undertake the program which has saved from 1/2 to 1-1/2 million gallons per day each year. The continuing reduction of the cost of leakage repair and the quantity of water lost through leakage puts the District at less than half of the national average for leakage and about the point where additional investments may not be cost effective. The District evaluates all pipe replacements to ensure that the benefits of leak detection, including the value of lost water, outweigh the cost of pipe replacement.

Comment

Advanced plumbing code: "Why not a proposal by staff?" This appears to be one of the policy questions which should be placed before the board for consideration.

Ken Kofman, Director, EBMUD

Response

The advanced plumbing code is an alternative presented in the Water Supply Management Program. As such it can be considered for adoption by the Board of Directors. Components of an advanced plumbing code would include more advanced plumbing fixtures, including ultra low water use toilets (1.5 gallons per flush) and showerheads (2.0 gpm), compared to current code requirements for low water use (3.5 gallons per flush and 2.75 gpm, respectively).

Comment

Page 3-4 of EIR. Water shortage: What happens if the expanded water conservation and reuse program figures are used rather than the "current" program?

Ken Kofman, Director, EBMUD

Response

The demand estimates referred to in the text and elaborated upon in Table 3.1 assume that the 1990 estimate includes the effects of the current water conservation and wastewater reclamation programs. The 2020 estimate includes the effects of the additional water conservation and reclamation programs that are a part of the Water Supply Management Plan.

Comments

Page 3-10 of EIR. Water conservation: As a result of recent drought-related action, the landscape guidelines should be taken out of this "proposed" section and placed in a "recently adopted" program category.

Ken Kofman, Director, EBMUD

Response

Comment noted. Text has been revised.

Comments

Page 3-11 of EIR. District activities: Explain how pressure reduction policies will "encourage" greater consumer conservation.

Ken Kofman, Director, EBMUD

Page III-14 of Technical Report: Pressure reduction study: Why is irrigation system upgrades put into this section? It is incorrect to state that water savings from system upgrades are unknown (unless EIR is referring to pressure reduction study).

Ken Kofman, Director, EBMUD

Response

Pressure reduction can be used as a short-term measure to reduce water demand. On a long-term basis it results in extra cost to water users, poorer water service, reduced fire protection, and user inconvenience. Since the District's system varies in elevation, the opportunities for system-wide pressure reduction such as those that would exist in the Central Valley are limited. Pressure reduction could produce water savings by reducing the flowrate through showerheads, faucets, sprinklers, etc.

An Irrigation Upgrade Pilot Study is identified as an alternative in the Water Supply Management Plan. Unfortunately, the projections of water savings resulting from irrigation upgrades cannot be relied upon for water resources planning since the program depends upon user cooperation and such programs have not been undertaken in similar areas or on a large scale.

Comment

Page 4-2 of EIR. Alternatives: No mention of a dual system to allow the use of Delta water for irrigation purposes, especially in the Walnut Creek area.

Ken Kofman, Director, EBMUD

Response

This alternative has been added to the discussion in Chapter 4 of the EIR.

Comment

Why can't a conservation program be made a condition for new connections?

Frank Delfino

Response

The District requires the following water conservation programs as a condition for new service:

- o All new connections must comply with existing state water efficient appliance utilization.
- o Most communities within the District have adopted landscape guidelines that emphasize efficient water use.
- o The District provides full-time technical consultations and has provided literature and guidance to professional gardeners and supply houses.
- o As part of the alternatives of the Water Supply Management Plan an expansion of these requirements for new connections are offered as alternatives.

Comment

Isn't there going to be more than 5 MGD of reclamation in the future as a result of new development and new projects?

Robert H. McClain

Response

The reclamation program is identified in the Technical Report as alternative 3. Existing reclamation projects are shown in the "Water Reclamation" section of the Technical Report. Opportunities for new reclamation projects are limited since they are only feasible where the area to be served for irrigation or industrial purposes is near a wastewater disposal plant. The WSMP has estimated that the potential for existing reclamation of 5 MGD and the additional potential of 5 MGD exists. The District's policy is to use the future water development fund to help subsidize the construction of reclamation projects which in turn expands the District's water supply potential.

Comment

Page III-13 of Technical Report: Landscape Consultations: 50 consultations were conducted in 1987 with what result?

Ken Kofman, Director, EBMUD

Response

Given the short time to observe water use from one summer to the other, the District is unable to determine the exact gallonage saved as a result of the 50 consultations. But if one assumes that each of these consultations were to comply with the Landscape Guidelines as opposed to a typical landscape irrigation plan then the estimated water savings resulted from these 50 consultations would be 0.8 MGD.

Comment

Page III-23 of Technical Report: Existing terminal storage limitations: Third sentence should be modified to add "or consumer demand is significantly reduced."

Ken Kofman, Director, EBMUD

Response

Comment noted.

Comment

Page III-34 of Technical Report, Key Factors: "It is unreasonable to assume" is an editorial comment. Unless a poll has been done, or communities which have adopted expanded water conservation are surveyed, the statement should be clearly identified as a staff opinion.

Ken Kofman, Director, EBMUD

Response

Comment noted.

Comment

Page III-35 of Technical Report, first full paragraph regarding maintaining a strong existing economy: This editorial comment should be rewritten. Undertaking significant rigorous water conservation measures to insure that there is an adequate supply for economic growth would appear to be a positive, rather than a negative, message.

Ken Kofman, Director, EBMUD

Response

Comment noted.

Comment

Page V-10 of Technical Report: Statement that mandatory changes "are unlikely to be accepted by the public" is an editorial comment. And the acceptance by the public of a drastic change in building codes following the energy crisis and 1976-77 drought would seem to indicate otherwise.

Ken Kofman, Director, EBMUD

Response

Comment noted.

Comment

Conservation by existing customers since the 1976-77 drought has enabled the District to add 35,000 new households to the detriment of existing ratepayers because severe rationing will be repeated.

Al Silbert

Response

As a utility, EBMUD has an obligation to provide water service to new development planned and approved by the 20 cities and two counties within its boundary and to annexations within its ultimate boundary. Part of the reason of the Water Supply Management Program is to improve the security for existing customers while accommodating the needs of new customers. The critical need is during an outage or shortage when all customers need to cutback.

Conservation by existing customers since the 1976-77 drought has not enabled the District to add 35,000 new households. District staff, in accordance with the Board of Directors and its citizens committee determined the current available water supply to be 240 MGD for planning purposes. The District currently uses 220 MGD. Thus, conservation by existing customers did not create the ability to add new households.

The majority of the long-term conservation achieved in the 1977 drought occurred in industry, the single largest industry reduced by 10 million gallons per day. The addition of new households is an obligation of EBMUD. The additions are not to the detriment of existing rate payers since all new connections are on at least a pay-as-you go basis and since all new connections contribute to a fund to finance water supply improvements including storage and additional sources.

Comment

EBMUD supplied Marin with water in 1977.

Al Silbert

Response

EBMUD did not supply Marin with EBMUD water supply in 1977. The Metropolitan Water District of Southern California actually supplied the water for Marin.

EBMUD was just one link in a chain of water agencies that aided Marin. The situation can be simplified as follows. The Metropolitan Water District in Southern California sold part of its share of State Water Project water to Marin. That share came out of the Delta and was transferred into the South Bay Aqueduct (in Southern Alameda County). Then it went into San Francisco's Hetch Hetchy System, through the City of Hayward's system, and finally entered EBMUD's system in San Lorenzo. The water was then taken out of EBMUD's systems in Richmond and was delivered to Marin via a pipeline on the San Rafael Bridge.

Comment

Neither report identifies an environmentally superior alternative among all the alternatives. The pros and cons of each alternative should be presented in more detail.

John K. Van de Kamp, Attorney General

Response

The "no project" alternative is not the environmentally superior alternative because of the effects on the population and communities that would be caused by an insufficient water supply in the event of an outage or drought shortage. In the "no project" alternative customers would experience extreme hardships as a result of having to decrease their water usage by as much as 70 percent. Outdoor water use would have to be completely eliminated. Indoor water use (showers, cooking, toilet, etc.) would have to be reduced substantially. Businesses and industries would be affected. While it is not possible to identify a single superior alternative, the proposed program in the Water Supply Management Program attempts to balance the environmental impacts with human needs.

Comment

Could a combination of aqueduct security, water conservation, and agreements with neighboring water agencies form a viable alternative as a unit? The alternatives discussion lacks sufficient detail for comparison and therefore, for informed public participation.

John K. Van de Kamp, Attorney General

Response

Such a combination is viable as are others. Please refer to the expanded discussion of alternatives in Chapter V of the Technical Report.

Comment

In the event of a disaster, San Luis Reservoir is going to be the source of water for the Bay Area.

Jerry Meral, EBMUD Public Hearing

Response

An intertie with San Luis Reservoir would require a pipeline well over 100 miles long. Santa Clara Valley Water District is the closest agency to EBMUD that receives water from this project. Water marketing "or water wheeling" options through adjacent water agencies were considered. This is discussed in more detail in Chapter V of the revised Technical Report.

Comment

The DEIR does not address limiting hookups as a demand management strategy.

Doris Sloan

Response

Refer to the responses to comments on Issue 2: Obligation to Serve.

Comment

The District should scale down its expensive and intrusive water conservation program.

Edgar Mendelsohn

Response

Comment noted.

Comment

Why are the water conservation and reclamation figures so much less than shown in our Urban Water Management Plan, Table III-5?

Ken Kofman, Director, EBMUD

Response

Several conservation measures from the Urban Water Management Plan were considered but were not included as part of the proposed Water Supply Management Program because their effectiveness was not known.

Comment

A separate water District should be set up in Central Contra Costa County that buys water from EBMUD. It would have a contract that guarantees a drought cutback of the same percentage as EBMUD cuts back. This new District would have emergency connections to CCWD as a leverage against EBMUD.

H. T. Nelson, Moraga Public Hearing

Response

Comment noted.

Comments

The government could offer financial incentives for using drip irrigation or other low-flow devices.

Nancy Cardenalli Fahden

The government could offer financial incentives for industries to use reclaimed water.

Nancy Cardenalli Fahden

Response

EBMUD prices its reclaimed water competitively so that there is a financial incentive to use it. As discussed in Chapter III of the Technical Report, EBMUD is considering several measures such as landscape rebates and toilet rebates that would provide financial incentives for conservation.

Comment

EBMUD ought to poll customers as to which Water Supply Plan alternatives they prefer.

James Blickenstaff, Sierra Club

Response

The EBMUD Board of Directors has decided to place an advisory vote on the November ballot to ask customers whether a terminal reservoir should be constructed at the Buckhorn site.

ISSUE 11: USE OF DELTA WATER

Comments

EBMUD should consider the pump back operation of Delta water to Camanche Reservoir (that it is presently using for its drought relief) to provide additional firm yield to the Mokelumne River supply.

B. Polt
Howard Kerr
Stuart L. Somach; McDonough, Holland, & Allen, Attorneys
David Fullerton, Sierra Club, Water Committee
Al Silbert
Ken Kofman
Albany City Council
Jerry Meral, EBMUD Public Hearing
Questioner, EBMUD Public Hearing
Peter Vorster, EBMUD Public Meeting

A "pumpback scheme" from the Delta to Camanche will worsen salt water intrusion into the Delta.

Charles Mavinovich

Response

On August 18, 1988, the State Water Resources Control Board (SWRCB) denied EBMUD's drought emergency request to pump Delta Water (at a rate of 90 cubic feet per second) to Camanche Reservoir to provide water for instream uses and crop irrigation downstream of Camanche Dam. The project would have allowed more high quality Mokelumne water to be stored in Pardee Reservoir to be used as drinking water by EBMUD's 1.1 million customers. The SWRCB concluded that the proposed pumpback project could not be implemented without injury to any other lawful user of water, that the project could not be implemented without unreasonable effect upon fish, wildlife, or other instream beneficial uses, and that the proposed project is not in the public interest. These conclusions were drawn despite the numerous mitigation measures included as part of the proposed project which would have eliminated or reduced to very low levels the potential for any long-term, adverse effects.

Comment

Would Delta water be usable in an outage?

Peter Vorster
Al Silbert

Response

Refer to the "Conclusions Regarding Source" section of Chapter IV of the Technical Report.

Comments

The EIR shouldn't compare chemical properties of Delta water versus Mokelumne water. Rather, it should examine the health impact of once-in-a-decade use of Delta water with advanced treatment. What is the increased cancer risk or other health risks in drinking a blend of treated Delta water and Mokelumne water for a determined period of time (6 months to an extended period)?

Peter Vorster

Response to Sierra Club requesting information regarding health risks associated with trihalomethanes (THMs).

David P. Spath, Ph.D., Department of Health Services

Response

Refer to the comment letter of June 15, 1988 from Dr. David Spath of the California Department of Health Services (DOHS). The DOHS analysis was limited to the infrequent use of Delta water for six months at a time and a trihalomethane level of 80 ug/L. During actual drought or outage emergencies, the use of Delta water could be required for longer than six months and trihalomethane levels in the system could be considerably higher. Also, as described in Chapter IV of the Technical Report, THM levels in EBMUD's system could be elevated for several years due to a short period (a few months) of use of Delta water in EBMUD local reservoirs. The analysis assumed that all THMs are in the form of chloroform. In reality a large percentage of the THMs would be brominated forms which may be more potent carcinogens than chloroform.

It is important to note that drinking water standards for cancer causing compounds are typically set at the level which causes one excess cancer case per one million in population. The current trihalomethane standard of 100 ug/L was based also on technical and economic factors and is expected to be lowered substantially by EPA within the next few years to better reflect health risks. The DOHS analysis of intermittent Delta water use by EBMUD concluded that there would be approximately 61 to 70 excess cancer cases per million in population. This is at least one to ten cancer cases per million more than what would theoretically occur without the intermittent use of Delta water. This analysis did not take into account other disinfection by-products which will be regulated by EPA within the next five years.

Comment

That it is permissible to reduce water quality during the 4-year construction period (5-33), conflicts with the standards presented in Section 4.3.3 where EBMUD suggests that using the southern Delta water during an emergency is inconsistent with its goals of providing customers with the highest quality water available."

Leora R. Feeney, Golden Gate Audubon Society

Response

Any degradation of the water quality in Upper San Leandro Reservoir during the construction of Buckhorn Dam would be primarily related to an increase in turbidity, which can be removed at the Upper San Leandro Filter Plant. The concern with the use of Delta water, however, is with increased trihalomethanes (cancer risk), sodium (high blood pressure risk) and taste and odors.

Comment

How long of a period could Delta water be used at various blending ratios before additional treatment would be required? Would a new treatment facility need to be built if Delta water were used on a short-term, highly intermittent basis?

Nancy Cardenalli Fahden, Contra Costa Supervisor
Peter Vorster
Edgar Mendelsohn

Response

Refer to the "Background" and "Conclusions Regarding Source" sections of Chapter IV of the Technical Report.

Comment

It is reasonable to assume that during droughts, water quality in the Delta will be maintained at a level adequate to allow the diversion of water for municipal purposes.

Stuart L. Somach; McDonough, Holland & Allen, Associates

Response

Refer to the "Conclusions Regarding Source" section of Chapter IV of the Technical Report.

Comment

Delta Island flooding or levee failure during periods of high Delta outflow would cause little, if any, detrimental impact to Delta salinity at the time of the flooding event.

Stuart L. Somach; McDonough, Holland, & Allen, Attorneys

Response

Disagree, please refer to the "Impacts on Delta Water Quality" section in Chapter II of the Technical Report.

Comment

THMs are no serious problem because ozone treatment and granular activated carbon remove most of them from the water.

Al Silbert

Response

Refer to the "Conclusions Regarding Source" section in Chapter IV of the Technical Report.

Comment

I wouldn't want to eat or drink the things out of the Delta.

Gerald Rose, Public Hearing

Response

Comment noted.

Comment

Page IV-5 of Technical Report EBMUD experience with Delta water: Add a sentence regarding the standards if CCWD treated water would be used by itself as well as blended with Pardee water.

Ken Kofman, Director, EBMUD

Response

Refer to the "Conclusions Regarding Source" section of Chapter IV of the Technical Report.

Comment

What evidence is there to support the view that the consumers do not want a temporary reduction in quality during a drought?

Hazel and Paul Shewell

Response

Refer to the "Conclusions Regarding Source" section of Chapter IV of the Technical Report.

Comment

What is the capacity and other specific information on the \$370 million treatment facility?

Frank Delfino

Peter Smurr, Save the American River Association, Public Hearing

Ora Huth, League of Women Voters

Robert H. McClain

Ken Kofman, Director, EBMUD

Response

Refer to the "Conclusions Regarding Source" section of Chapter IV of the Technical Report.

Comment

Recommend developing a 10 to 20 MGD ozone and GAC treatment facility for Delta water. The output would be blended with Mokelumne water during winter and spring when Delta water is at its best. The facility should be capable of being expanded in similar sized units as increase in demand requires.

Frank Delfino

Response

Refer to the "Delta Water Use" section in Chapter V of the Technical Report.

Comment

Will water treatment facilities be required of EBMUD whether or not the USBR water supply is taken from a location other than the Folsom-South Canal?

Stuart L. Somach; McDonough, Holland & Allen, Attorneys

Response

If water were pumped from the Folsom-South Canal and blended with Mokelumne water in the Mokelumne Aqueducts, treatment facilities (in addition to what may be required in the future for Mokelumne water) would not be needed. All other downstream diversion points will require extensive treatment.

Comment

What's wrong with using Delta water once in 83 years?

Patricia Burke, EBMUD Public Hearing

Response

The problems associated with the use of Delta water are described in the Technical Report and in the responses to the other comments related to the use of Delta water.

Comment

The Delta should not be considered because it is contaminated with salts, pesticides, and toxic wastes from agricultural drainage and treated sewage effluent from Sacramento and other cities.

Donn Dears, W.A.T.E.R., EBMUD Public Hearing

Herb Crowle, EBMUD Public Hearing

Gerald Rose, EBMUD Public Hearing

Response

Comment noted. See discussion regarding the concerns with the use of Delta water in Chapter IV of the Technical Report.

Comment

Page V-6 of Technical Report: Delta water use: In the sentence "The use of Delta water is not a viable alternative for the needed security improvements," the word "viable" should be replaced with the word "recommended."

Ken Kofman, Director, EBMUD

Response

The use of Delta water is not recommended for the needed security improvements. The use of Delta water is also not a reasonable alternative because of the potential for extremely high salinities during major flooding which would make the water unfit to drink.

Comment

Page 9-3: Use of Delta water: Why is it necessary for Delta water to be put into terminals?

Ken Kofman, Director, EBMUD

Response

The raw water transmission and treatment system is fully integrated and interconnected. Therefore, all sources of water would be expected to be found throughout the system. The impacts of blending Delta water with Mokelumne water at both the direct filtration plants (Walnut Creek, Lafayette, and Orinda) and the treatment plants supplied by terminal reservoirs (Sobrante, San Pablo, and Upper San Leandro) are described in the "EBMUD Experience with Delta Water" section of Chapter IV of the Technical Report.

Comment

Page IV-5 of the Technical Report, first full paragraph: The sentence beginning with "if a water low in minerals" is not clear.

Ken Kofman, Director, EBMUD

Response

Mokelumne water is considered to be low in mineral content. The total dissolved solids level in Pardee Reservoir is about 40 mg/L.

Comment

The occasional and temporary use of Delta water is never seriously examined on the grounds that it is against District Policy. This violates CEQA Guidelines.

David Fullerton, Sierra Club, Water Committee

Response

Refer to the "Background" and "Conclusions Regarding Source" sections of Chapter IV of the Technical Report and Chapter V of the Technical Report.

Comment

The EIR does not compare costs for upgrading Delta water in emergencies.

Hazel and Paul Shewell

Response

Refer to the "Conclusions Regarding Source" sections of Chapter IV of the Technical Report and Chapter V of the Technical Report.

Comments

EIR shouldn't compare chemical properties of Delta water versus Mokelumne water, rather it should examine the health impact of once-in-a-decade use of Delta water with advanced treatment.

Sierra Club

Can you review the feasibility of taking in Delta water at this point (May '88). Has the pumping operation back to Camanche begun? What would the capacity be?

Questioner, EBMUD Public Meeting

Response

Refer to the "Delta Water Use" section of Chapter V of the revised Technical Report.

Comment

Would it be technically feasible to pump both ways at once between Bixler and Camanche, i.e., both uphill into Camanche and into the system?

Speaker, EBMUD Public Meeting

Response

It would be technically feasible to pump both ways in the Mokelumne Aqueducts from Bixler. However, it would require considerable modifications to existing facilities and the construction of new facilities.

Comment

The DEIR needs to address water treatment costs for current water supplies as well as for future water supplies.

Stuart Somach; McDonough, Holland and Allen, Attorneys

Response

Refer to Chapter IV of the Technical Report.

ISSUE 12: SECURE AQUEDUCTS IN THE DELTA

Comment

EBMUD should fix the aqueducts in the Delta instead of building storage.

V. and E. Gunther
Anthony Fisher
Edgar Mendelsohn
Kirk Peterson
Paula Hartman
Jerry Meral
David Fullerton, Sierra Club, Water Committee
Robert H. McClain
Howard Kerr
Seth Adams, EBMUD Public Hearing
Arthur B. Geen, Alameda County Taxpayers Association

Response

Refer to comment in Issue 7.

Comment

What about Pardee Reservoir as a source of supply in an outage? If aqueducts were secure wouldn't this be adequate?

Robert H. McClain

Response

In an outage, supply from Pardee Reservoir would be severed and unavailable. However to make the reservoir supply secure, replacing the aqueducts would cost about \$265 million while additional terminal storage would cost \$152 million.

Comment

New pipeline across the Delta: Why two pipelines? What is the cost for a single pipeline around the Southern End of the Delta? What capacity would one pipeline have to be in order to provide enough water (at reduced consumption) until the cross-Delta aqueducts are repaired?

Ken Kofman, Director, EBMUD

Response

Two 86-inch pipelines across the Delta would provide full capacity of 325 MGD. Preliminary studies compared the cost for a new pipeline across the Delta based on the delivery of the full 325 MGD capacity. The least expensive alternative for constructing a new pipeline across the Delta is an alignment parallel to the existing aqueducts. A cost comparison was also made for a single pipeline for this alignment.

The studies indicate that a second pipeline is more cost effective than a single pipeline. The estimated cost to construct a secure single aqueduct parallel to the existing aqueduct is approximately \$175 million while a double aqueduct is \$265 million. Since a double aqueduct is more cost effective, single pipeline costs were not developed for the other alignments, including a single pipeline around the Delta.

As discussed in both the Technical Report and the EIR, a new pipeline across the Delta would not reduce the risk of water shortage during droughts.

Comment

What about a new Mokelumne Aqueduct that bypasses the Delta?

Ken Kofman, Director, EBMUD

Response

A secure pipeline around the vulnerable Delta area would cost more to construct than a secure aqueduct adjacent to the existing alignment. The "around Delta" route would extend around the southern end of the Delta, from Bixler to Holt at an estimated cost of \$415 million. A secure aqueduct adjacent to the existing alignment is estimated to cost \$265 million. This alternative would not reduce the risk of water shortages during drought and is more expensive than additional terminal storage (\$152 million to \$186 million).

Comment

The Mokelumne Aqueduct Replacement alternative: If this less environmentally damaging alternative is feasible and sufficient, why does the program include a new terminal reservoir? How and when will EBMUD determine feasibility? Will EBMUD proceed with the reservoir? What impact will aqueduct replacement have on water supply availability?

John K. Van de Kamp, Attorney General

Response

Repair or replacement of the Mokelumne Aqueducts as a single component would likely be more environmentally damaging than construction of a terminal reservoir because it would not provide any additional water during droughts. This would result in large water use reductions during dry years at significant personal and environmental cost.

ISSUE 13: OTHER ALTERNATIVES

Comment

Please clarify the specific impacts and costs of utilizing Sacramento River or Delta water.

U.S. Department of Interior, Bureau of Reclamation

Response

The water quality of Mokelumne River (Pardee Reservoir), American River, Sacramento River and Delta water at Clifton Court and Indian Slough are compared in Figure IV-1 of Technical Report. The high THMFP of Sacramento and Delta water will require additional treatment with GAC and ozone at costs ranging from \$350M for Sacramento River water to \$370M for Delta water. This is at an average flow rate of 134 MGD and for treatment to THMs level of 30 ug/L which is comparable to Mokelumne River's 27 ug/L. Despite this, Delta water may still be saline enough to pose a hypertension and high blood pressure risk especially during droughts and when Delta islands are flooded such as after major earthquakes.

Comment

Suggest evaluation to stabilize one or more of the present elevated aqueducts by injecting umbrella-type anchors into the firm sand and staying the structure with post-tensioned cables or rods.

Pete Fowler

Response

According to the 1981 Converse Report, the existing aqueducts and any proposed secure aqueduct will need a foundation system that can resist liquefaction during an earthquake. An anchor type system injected into firm sand will not prevent liquefaction failure of the soil surrounding the foundation. Without a secure foundation, the aqueducts will suffer severe damage and collapse.

Comment

Suggest evaluating a spare aqueduct carried in an anchored trough. In the event of flooding, the trough would float. A trough with enough freeboard may operate as a flume with no pipe at all.

Pete Fowler

Response

During an earthquake, liquefaction of the surrounding soil will not provide adequate support for either a pipeline or a trough. Most large diameter pipelines are rigid and require a firm support system. Damage to both pipeline and trough can be expected during liquefaction, due to the lack of adequate foundation support in the Delta.

Comment

I would like some assurance that a reservoir (Buckhorn) is the most cost-effective way to improve water supplies.

William Knecht

Response

Comment noted.

Comment

Desalination of sea water should be considered.

Robert Doelle

Response

Refer to the "Analysis of Security Alternatives" Section of Chapter V in the Technical Report.

Comment

Additional storage facilities on the Mokelumne should be investigated for use as drought protection.

Stuart L. Somach; McDonough, Holland, & Allen, Attorneys

Response

Comment noted. See Chapter III of the Technical Report.

Comment

Is water available from the Stanislaus River from the New Melones Project?

Robert H. McClain

Response

This issue is discussed in the Technical Report (page III-40). Of the projected firm yield of 180,000 acre-feet in the year 2020, 131,000 acre-feet is projected to be required by users within the Stanislaus River Basin. The remaining 49,000 acre-feet is not available because it has been allocated to other areas within the Central Valley Project.

Comment

Explain why existing reservoirs cannot be expanded.

Buckhorn Preservation Council
Ken Kofman, Director, EBMUD

Response

Refer to the "CONCLUSIONS ON THE MOST FEASIBLE ALTERNATIVES" Section in Chapter V of the Technical Report.

Comment

CEQA guidelines state that environmentally superior alternatives must be explored even if they do not fully meet project objectives or are more costly.

David Fullerton, Sierra Club, Bay Chapter Water Committee
Karen Garrison, EBMUD Public Hearing
Stuart Somach; McDonough, Holland & Allen, Attorneys

Response

The Water Supply Management Program has explored both feasible and infeasible alternatives to meet the District's water supply goals including the Do Nothing alternative. Chapter V of the Technical Report discusses in detail these alternatives.

Comment

The EIR does not adequately consider an aqueduct circumventing the Delta.

Elliot Abers, EBMUD Public Hearing

Response

Discussion of this alternative has been expanded in Chapter 4 of the Revised Draft EIR.

Comment

Could water be pumped through the Hayward connection to fill EBMUD terminal reservoirs?

Peter Vorster, EBMUD Public Meeting

Response

Refer to the discussion on Interties in the "Analysis of Security Alternatives" in Chapter V in the Technical Report.

Comment

Does EBMUD have any groundwater resources available?

Questioner, EBMUD Public Meeting

Response

Yes, but very limited. See discussion in Chapter II of Technical Report and refer to groundwater discussion under Issue 10 of this volume.

ISSUE 14: AMERICAN RIVER

Comment

EBMUD should aggressively pursue the allotted American River water.

Howard Kerr
Gerald Rose, Public hearing
Al Silbert

There were several comments stating that additional information regarding the American River be included in this Water Supply Management Program Report.

Stuart L. Somach; McDonough, Holland & Allen, Attorneys
David Fullerton, Sierra Club, Water Committee
Seth Adams
Helen Burke, Director, EBMUD
Peter Smurr, Save the American River Association, Public Hearing
Ken Kofman, Director, EBMUD
Roger Reeve
Peter Vorster
Charles Mavinovich

The DEIR states that the American River is a viable alternative but for unresolved legal problems. But on the next page, it states that there are indications that the litigation may soon be resolved. What are the legal problems? What effect will resolution of the suit have on feasibility?

John K. Van de Kamp, Attorney General
Questioner, EBMUD Public Meeting
Amy Fowler, EBMUD Public Meeting

I'm not persuaded by the promise that water would be taken only in time of plenty.

Bea Cooley, Friends of the River, Public Hearing

Since we have the American River water why do we need a terminal reservoir?
Could we store it in Pardee?

Al Silbert
Robert H. McClain
Ken Kofman, Director, EBMUD

USBR contract: Would a 145,000 acre foot reservoir be needed if EBMUD is able to take water from Folsom South Canal or would a smaller size reservoir do as well?

Ken Kofman, Director, EBMUD

Response

In May 1988 the State Water Resources Control Board ruled in favor of EBMUD's American River contract. The case will now return to Alameda County Court to conclude the trial. In anticipation of a favorable court ruling, EBMUD is beginning the environmental documentation required for construction of the pipeline to connect the American River supply to the Mokelumne Aqueducts. (See Technical Report, Chapter V, for additional information.)

ISSUE 15: ECONOMIC EVALUATION OF ALTERNATIVES

Comments

The costs for the various alternatives are not comparable.

Peter Berck
Councilmember Connors, Moraga Public Hearing
David Fullerton, Sierra Club, Bay Chapter Water Committee
Steve Meyers
Helen Burke, Director, EBMUD

EBMUD should prioritize each planning option on a least-cost basis.

Robert J. Maivris, Buckhorn Canyon Preservation Council

Response

A detailed evaluation of all the alternatives is presented in Chapter V of the revised Technical Report. While the low cost alternative provides nothing in times of drought and outage, the alternatives that provide the most security are more costly. Chapter V evaluates these tradeoffs.

Comment

\$152 million for Buckhorn is based on 1988 costs with no inflation factor.

Hazel and P. Shewell, Moraga Public Hearing

Response

The \$152 million incorporates inflation factors but is expressed in today's dollars for clarity.

Comment

Buckhorn doesn't appear to be very cost-efficient as it can't be filled by gravity.

Charles S. Mavinovich

Response

None of the reservoirs at their proposed elevations can be filled by gravity.

Comment

The report contains too much concern for personal landscaping. There should be greater concentration on the protection of the aqueducts.

Frank Delfino

Response

Comment noted.

Comment

What is the cost comparison for toilet rebates (per MGD) versus aqueduct cost (per MGD) versus cost of storage (per MGD)? Should District increase the rebate incentive?

Frank Delfino

Response

<u>TOILET REPLACEMENT</u>	<u>ADDITIONAL STORAGE</u>	<u>NEW AQUEDUCT</u>
*\$8 million/MGD	**\$2.4 million/MGD	\$170-\$265 million with no increase in available supply.

*Based on \$300, replacement of 5.5 gallon tanks in single family residences.

**Based on cost of Buckhorn Reservoir.

Comment

Shouldn't property costs be included for all three alternatives?

Tom Buckingham

Response

Property costs were included for all three alternatives. EBMUD owns most of the watershed land at Buckhorn Reservoir.

Comment

The increased cost of an alternate pipeline has increased benefits.

Edgar Mendelsohn

Response

The additional cost (\$15 million) of an alternate pipeline (aqueduct across the Delta) has no permanent increased benefits over the proposed pipeline.

Comment

A terminal reservoir with a capacity to provide 80 MGD is not comparable to building a new pipeline with 325 MGD capacity.

Peter Berck, UC Berkeley Resource Economics Department

Response

It is difficult to synthesize alternatives that are directly comparable. A new pipeline would eliminate the possibility of an aqueduct outage but would not provide more water during droughts. Additional terminal storage would reduce the risk of water shortage in both droughts and in the event of an aqueduct outage.

Comment

The report does not include O&M costs.

Robert H. McClain

Ken Kofman, Director, EBMUD

Peter Berck, UC Berkeley Resource Economics Department

Response

Refer to the "Allocation of Cost and Financing" section of Chapter V of the revised Technical Report.

Comment

The benefits of toilet replacement would be less sewers. This was not covered.

Peter Berck, UC Berkeley Resource Economics Department

Response

Toilets contribute only a small amount to the sewer system. Other sources, namely dishwater, bath water and shower water also contribute to the sewer system. What governs size of sewers is the peak flows expected - smaller amounts of water used for toilet flushing is not likely to affect peak flows.

While toilet replacement could reduce demands, it would be unlikely that the capacity of the sewer system would be reduced significantly based on a reduction of demand that is unknown at this time.

Comment

Discount rates were not discussed.

Councilmember Connors, Moraga Public Hearing

What is the cost when the cost of financing is included?

Ora Huth, League of Women Voters

Response

A discount rate of 10 percent was assumed in the calculations presented in Chapter V of the Technical Report.

Comment

A potential hidden cost of Buckhorn would be liability and lawsuit costs.

Gregory Johnson, Ph.D.

Al Silbert

Robert H. McClain

Susan Adams, EBMUD Public Hearing

Greg Johnson, Moraga Public Hearing

Response

All construction projects involve risk and the possibility of lawsuits. It is not clear that construction of Buckhorn Reservoir would be more costly in this regard than Pinole or Los Vaqueros Reservoirs or the District's existing reservoirs.

Comment

Buckhorn would cost ratepayers \$10 million over 30 years, while water marketing would cost only \$100,000 per year.

Dr. Phillip Leveen

Buckhorn Preservation Council

Response

The comment is noted. For a more complete picture of the total costs of all alternatives, see Chapter V of the Technical Report. Water marketing activities necessary to produce a yield of 50,000 would cost more than \$100,000.

Comment

Why was the cost of filling the reservoirs not included with the costs of the projects?

Robert H. McLain

Response

The cost of filling the reservoir is considered part of operation of the reservoir as opposed to part of the capital cost of constructing the reservoir.

Comment

Why weren't annualized costs for the various reservoir alternatives presented? These should include cost of utility relocation and mitigation programs.

Robert H. McClain

Response

Refer to Chapter V of the revised Technical Report. Operation and maintenance costs have been incorporated in this revised report.

Comments

Please quantify the costs of raising existing dams.

Preliminary Reservoir site evaluation: What are the estimated yearly operating costs of each facility listed?

Ken Kofman, Director, EBMUD

Response

Raising any of the existing dams to develop an additional 145,000 ac-ft would require tripling the size of any one of the reservoirs. The watershed encroachment and cost of such enlargements would not be substantially different than building new facilities.

Comment

The enormous cost of ensuring a high quality of water during an emergency does not equate with responsible fiscal management.

Hazel and Paul Shewell

Response

Comment noted.

Comment

You have not justified the expense of a new reservoir to me as a ratepayer.

Patricia Martin

Response

Comment noted.

BUCKHORN PROJECT IMPACTS

ISSUE 16: BUCKHORN PIPELINE ALIGNMENT

Comment

Could the Right-of-Way of the Flood Control District be used for the new pipeline? The following inducements might attract abutting landowners to endorse such a proposal:

- o no increase in property taxes
- o allow landowners to pump from Sanders Creek

William Knecht

Response

The District has no jurisdiction over the assessment of property taxes or the water rights issues of Sanders Creek. Several alternative pipeline/tunnel alignments have been identified (refer to "Buckhorn" Section of Chapter V and Section 5.12 of the Revised Draft EIR).

Comments

Are there other possible locations for the pipe?

Patricia Reynolds
Moraga Town Council
Councilmember DePriester, Moraga Public Hearing
Mayor Kendall, Moraga Public Hearing
Robert K. Muehler, Moraga Public Hearing

DEIR should include an assessment of alternative means of conveying Mokelumne River water to the proposed reservoirs. Alternatives should include those that allow multiple use of the water by conveying it by the river channel to the Delta.

Department of Fish and Game

Response

Refer to "Buckhorn Reservoir" Section of Chapter V of the revised Technical Report.

Comments

Could water be pumped into Buckhorn from Upper San Leandro Reservoir in lieu of a pipeline through Moraga?

Moraga Town Council
Vice Mayor Dessayer, Moraga Public Hearing

Prefer bringing water in over Bollinger Canyon.

Carl Shanahorn, Moraga Public Hearing

Response

Refer to "Buckhorn Reservoir" Section of Chapter V of the revised Technical Report and Section 5.12 of the Revised Draft EIR.

Comment

There is serious concern over construction noise, dust, traffic safety, loss of business, and overall impact on the City of Moraga.

Mulberry Tree Pre-School
R. and S. Tarica
Norma Cuneo
Mr. and Mrs. Osmon
Maureen Fitzpatrick
Margaret Mahoney
John Cooley, Moraga School District
E. Psathos
W. and M. Thompson
Patricia Reynolds
David and Gina Hiatt
Bettie Graves, Moraga School District
Moraga Town Council
Elliott Abers, Moraga Public Hearing
Carl Shanahorn, Moraga Public Hearing
Barbara Simpson, Moraga Public Hearing
Ken Langan, Moraga Public Hearing
Vice Mayor Dessayer, Moraga Public Hearing
Aida M. Peterson
Jack P. Grant
Robert K. Mullen, Moraga Public Hearing
Hazel & Paul Shewell, Moraga Public Hearing
Al Silbert
Rose Schneller, Moraga Public Hearing

M. & L. Dressel
Rita & Fred Keeperman
Susan Adams, EBMUD Public Hearing
F. M. Martin
Zoe Klippert
Sally McKirgan
Councilmember Connors
Carl E. and Jane B. Shanahorn,
Moraga Public Hearing
Gregory Johnson, Ph.D.
Marjorie Richman
Ronald Rubenstein
Fred and Ramona Phares
George M. Oldenbourg, Jr.
Candice Berthron
Mrs. Hogan
Jack Grant
William Dabel, Mayor of Orinda
William Knecht
Nancy Prickett

Response

Comment noted. These issues are addressed in Chapter 5 of the revised Draft EIR.

Comment

What will be the impacts on Lafayette streets when commuter traffic shifts from St. Mary's Road to Moraga Road?

City of Lafayette

Response

Construction activities on St. Mary's Road will last about one month. During most or all of the time two-way traffic will be maintained. If users of St. Mary's Road are inconvenienced some may switch to Moraga Road. Peak hour traffic in Lafayette may be adversely affected for one month.

Comment

How deep will the trench be?

Elliott Abers

Response

The trench would be about 14 feet deep.

Comment

If roadway failure occurs, how will truck traffic be rerouted?

Paula Hartman

Response

If pavement failure occurs it will be repaired so that trucks can continue to use the preferred routes.

Comment

I have never seen a haul truck with a tarpaulin.

Marjorie Richman

Carl Shanahorn, Moraga Public Hearing

Response

Covering of haul trucks is increasingly required as a condition of construction contracts as it will be on this project.

Comment

How will this construction impact property values?

Marjorie Richman
Kathryn Carr, Moraga Public Hearing
Jack P. Grant

Response

Properties along the pipeline route may be less attractive to potential buyers during the construction period, but no long-term effect on property values would be expected. The presence of large water pipelines under streets does not appear to depress the value of adjacent properties.

Comment

We have suffered property damage as a result of development across the road and had to put in new drainage pipes and retaining walls at our own cost.

Aida Peterson, Moraga Public Hearing

Response

Comment noted. Construction of the pipeline would not affect local drainage patterns.

Comment

What about blockage of driveways?

Ed Bisiar, Moraga Public Hearing

Response

Some driveways would be blocked for from a few hours to several days. Temporary access would be provided by placing steel plate bridges over trenches.

Comment

Increased hydrostatic pressure caused by pipeline will force swimming pools out of ground.

Jack P. Grant

Response

The pipeline will not increase hydrostatic pressure in the ground adjacent to it and will not affect swimming pools.

Comment

EIR does not mention hospitals and convalescent homes as being impacted.

Buckhorn Preservation Council

Response

We are unaware of any hospitals or convalescent homes near the pipeline route. The existence of the Moraga Royale retirement home is now noted in the EIR.

Comment

Camino Pablo is two lanes not four.

Ronald Rubenstein

Response

The Commenter is correct; Camino Pablo is a two-lane road, although its northerly portion could accommodate four lanes if striped differently and if parking is prohibited. The width of the road is such in this section that two-way traffic could be maintained during construction.

Comment

The pipeline should go through San Ramon or other areas of Alameda County since San Ramon will benefit from the reservoir and Moraga Way is already jammed with traffic.

Christine Cremer

Frances Fleurbaaij

R. V. Osmon

Carl Shanahorn, Moraga Public Hearing

Response

Comment noted. The proposed pipeline route is the best way to connect Buckhorn Reservoir with the rest of the District's water supply system. Other routes are less desirable from an operational point of view or are more costly. The new reservoir would benefit all EBMUD customers, not just those in the San Ramon Valley.

Comment

There appears to be little headloss through the 66" pipe from Moraga.

Tom Buckingham

Response

The headloss in the 66" pipe between Moraga Pumping Plant and the Buckhorn Pumping Plant is 33 feet at a flow rate of 105 MGD.

ISSUE 17: BUCKHORN PUMPING PLANT SITE

Comment

Include details of the location of the proposed pumping plant site.

Tom Buckingham
Councilmember DePriester, Moraga Public Hearing

Response

Refer to "Terminal Reservoir Site" section of Chapter V of the revised Technical Report and Chapter 5 of the revised Draft EIR. Further information has been added.

Comment

There is concern over the operating noise and other impacts of the proposed pumping plant at St. Mary's and Rheem Roads. The proposed pumping plant is in a scenic corridor. What alternative sites were considered?

R. and F. Keeperman
Moraga Town Council
Bill Rees, Moraga Public Hearing
Bob Mitchell, Moraga Public Hearing
Councilmember Connors, Moraga Public Hearing
Fr. Michael Curey, St. Mary's College
Ken Kofman, Director, EBMUD

Response

The proposed pumping plant would be above grade and landscaped as shown in the EIR. The structure would be sound-insulated and the pumps powered by relatively quiet electric motors. The pump station will produce less noise than traffic on the adjacent road. Pumps will operate infrequently once the reservoir has been filled. The structures nearest to the pumping station are residences located at a distance of about 200 feet. Pump noise would not be audible inside these residences.

Comment

Install a retention basin at the alternative pump station site to control water runoff from Las Trampas Creek.

Fr. Michael Carey, St. Mary's College

Response

The structures necessary to control runoff to Las Trampas Creek could be as high as 100' above ground. Even when controlled, the runoff would still impact Las Trampas Creek.

Comment

Coordinate trenching and installing of pipeline with College to minimize impacts and bury overhead power lines from pumping station. Replace landscaping that is damaged or altered during process.

Fr. Michael Carey, St. Mary's College

Response

Comment noted. Landscaping at the pumping station would be as shown in the EIR. Electrical wiring for the pumping plant would be installed underground.

Comment

Page 5-4 of EIR: Report refers to 1.5 acres of land "adjacent" to St. Mary's (top paragraph) as well as 1.5 acres of land "owned" by St. Mary's (bottom paragraph). Are these two parcels or the same parcel?

Ken Kofman, Director, EBMUD

Response

The 1.5 acres is land that is owned by St. Mary's.

ISSUE 18: BUCKHORN TUNNEL ALIGNMENT

Comment

The geologic formation beneath the tunnel is unsafe.

Nancy Nadel

Response

The tunnel would be constructed to ensure safety with proper reinforcement and construction. The tunnel would consist of approximately 12 inches of concrete with a steel inner pipe.

Comment

The five tunnel alignments should be addressed.

Councilmember DePriester, Moraga Public Hearing

Response

Refer to the "Terminal Reservoir Site" Section of Chapter V of the revised Technical Report.

Comment

Page V-18 of Technical Report: Please explain the necessity for building a tunnel to connect Buckhorn with the Moraga Aqueduct? What about using the existing tunnel connecting Upper San Leandro?

Ken Kofman, Director, EBMUD

Response

The tunnel is needed to avoid the cost of pumping over a hill over 1,000 feet high while filling Buckhorn Reservoir. There is no tunnel connecting the Moraga Aqueduct (source of water for USL) with USL.

ISSUE 19: BUCKHORN RESERVOIR

Comment

Buckhorn will cause fog and climate changes.

Sally McKirgan
Nancy Prickett
Mr. and Mrs. Osmon
Elliott Abers
Ronald Rubenstein
John Connors
Patricia Reynolds
Moraga Town Council
Bettie Graves, Moraga School District
Councilmember Connors, Moraga Public Hearing
Aida M. Peterson
Carl E. & Jane B. Shanahorn, Moraga Public Hearing
Hazel & Paul Shewell
The Ecology Movement
Robert and Julia Skrdla

Response

Comment noted. Buckhorn Reservoir would not alter the microclimate - as discussed in Section 5-8 of the Revised Draft EIR.

Comment

Dust caused by blasting will affect Alamo, Danville, San Ramon, Livermore and Pleasanton.

Sally McKirgan

Response

Drill and blast methods may be used to construct the tunnel portion of the Buckhorn Aqueduct. If this is the case, blasting would be confined underground and would produce few airborne particulates. Some blasting may be necessary to excavate borrow areas but any dust generated would settle locally and would not affect urbanized areas several miles away.

Comment

Moraga must pay extra to have water pumped up and now EBMUD wants to disturb their lives so water can flow down.

Sally McKirgan
R. and F. Keeperman

Response

All EBMUD customers would share in the costs and benefits of the terminal reservoir. Some Moraga residents would be inconvenienced in order to obtain benefits for many water users.

Comment

This great body of water is too close to homes and communities.

Candice Berthrong
W. and M. Thompson
Mr. and Mrs. White
Ken Langan, Moraga Public Hearing
Al Silbert

Response

Comment noted.

Comment

What landfill sites are proposed for potential spoils sites? Would any have an impact on Orinda?

William Dabel, Mayor of Orinda

Response

Tunneling spoils would be disposed of on the reservoir watershed or in King Canyon. Pipeline construction spoils would be disposed of by the contractor. Because much of the spoils would be clean fill material, it would probably be stockpiled and used in a project requiring fill. Broken paving and other debris would be trucked to a landfill.

Comment

Siltation of Upper San Leandro Reservoir during construction of Buckhorn is a concern to us.

Golden Gate Audubon Society
Councilmember Connors, Moraga Public Hearing

Response

Construction of Buckhorn Dam would occur behind a small temporary cofferdam designed to hold back the water of Upper San Leandro Reservoir. Any silt generated during construction would be trapped behind the cofferdam and would be prevented from entering Upper San Leandro Reservoir.

Comment

In addition to eliminating substantial riparian habitat, the program could significantly affect regional air quality by inducing growth.

U.S. Environmental Protection Agency

Response

While provision of expanded water supply capacity would remove an obstacle to growth it would not induce growth beyond that planned by the communities that the District serves. See discussion in Chapter 10 in the Revised Draft EIR.

Comment

Recreational use on Buckhorn Reservoir will bring more congestion and problems to Moraga.

Aida M. Peterson
Carl E. & Jane B. Shanahorn, Moraga Public Hearing
Ronald Rubenstein

Response

Possibilities for recreation at Buckhorn and Upper San Leandro have been evaluated by staff and are included in Appendix E of the Revised Draft EIR. They are not analyzed in detail in the EIR itself because expanded recreation is not a part of the WSMP.

Comment

What is the impact on the Delta and regional water quality of taking water from the rivers for storage?

Moraga Town Council

Response

The new terminal reservoir would be kept full and only used during droughts or in the event of rupture of the Mokelumne Aqueducts. The reservoir would be filled from the Mokelumne River during wet years. Minimum release requirements applicable to Pardee and Camanche Reservoirs would be complied with. During reservoir filling, wintertime peak flows in the Mokelumne and the Delta would be reduced. This would not be expected to have a significant adverse impact on the Mokelumne or Delta, in fact it might reduce flood flows. The amounts of water used to fill Buckhorn are small in comparison with flood flows. For example, excess flows spilled from Pardee in 1986 at a rate that would fill Buckhorn Reservoir in three days.

Comment

Timing of construction in relation to construction of interchange for Highway 24 and 680.

Moraga Town Council

Response

Refer to Chapter 5 of the revised DEIR.

Comment

Can Buckhorn Reservoir be seen from any area of Moraga?

Moraga Town Council

Response

No. Buckhorn cannot be seen from anywhere in Moraga.

Comment

The significant impacts of this project must be identified.

David Fullerton, Sierra Club, Water Committee
Helen Burke, Director, EBMUD
Marjorie Richman
Michael Vandeman
Glenn S. Yoshiola

Response

The EIR has identified the loss of riparian habitat at the Pinole and Buckhorn sites, the impacts on geese at Pinole and spawning habitat at Buckhorn.

Comment

Page 2-16 of EIR: Third paragraph beginning with "The WSMP element." It would seem that providing for additional consumers as well as for drought also have environmental consequences.

Ken Kofman, Director, EBMUD

Response

The draft EIR has been revised to include a more detailed discussion on cumulative impacts. Please refer to Chapter 11 of the revised DEIR.

Comment

The WSMP documents represent a carefully crafted response to the District's needs and the recommendations should be implemented by your Board.

Alameda County Taxpayers Association

Response

Comment noted.

Comment

The EIR is clearly problematic and inadequate.

Clark Frentzen, P.E.
Ronald Rubenstein

Response

The EIR fulfills all California Environmental Quality Act provisions.

Comment

The EIR did not address the stress, quality of life, nor the safety of the residents during and after construction of the proposed Buckhorn Dam.

Mr. Hogan
Adel Hogan

Response

Chapter 5 of the revised draft EIR includes a discussion of the impacts of dam construction on traffic, noise and air quality as it affects Moraga residents and residents of Redwood Road in San Leandro and Castro Valley. The quality of life of some residents would be temporarily impaired during construction. The safety issue is addressed in the Geology Section of Chapter 5. Buckhorn Dam would have to meet the requirements of California Department of Water Resources, Division of Safety of Dams.

Comment

The area around Brown Ranch Road should be designated Qal.

Tom Buckingham

Response

When the graphic was reproduced, this designation was inadvertently cut off at the edge of the sheet.

Comment

The geological, hydrological, and archeological studies are simplistic, understated and inadequate.

John Connor

Response

Comment noted. The level of analysis and effort involved in the technical studies is sufficient to make findings about the probable environmental impacts of project alternatives. If and when a terminal reservoir site is selected more detailed studies will be necessary to complete the project design.

Comment

How will the water table be affected if Buckhorn is built?

Elliott Abers
George Aiken

Response

The water table adjacent to the reservoir will be raised to approximately the level of the water surface of the reservoir. The dam and its abutments will act as a barrier to downstream movement of groundwater. Prior to dam construction, studies will be undertaken to determine whether fissures exist that might allow water to leak out of the reservoir and move downstream through the ground. If fissures are found they will be blocked. During dam construction, concrete will be pumped into any openings in the ground in the vicinity of the abutments.

Comment

The EIR offers no inundation maps or statistics from a dam break.

F. M. Martin
Mary Anna McKinley
Marjorie Bowman
Patricia Martin
Commenter, EBMUD Public Meeting

Response

Section 5 includes information on the time of progress of a flood wave produced by dam failure. The narrative description of the inundation area has been expanded. Maps of the inundation have not been included because they are difficult to reproduce at a scale suitable for use in the EIR. The original inundation maps can be reviewed at the District's offices.

Comment

Statements regarding impacts on land use and residences resulting from building Buckhorn are understated in the EIR.

Councilmember DePriester, Moraga Public Hearing

Response

We believe the EIR provides an accurate picture of how land use and residences would be affected by construction and operation of Buckhorn Reservoir. Moraga residents would be inconvenienced by pipeline construction for a period of about 10 months. Once built, operation of the reservoir would not affect Moraga residents, other than to provide a more secure water supply for them and all other EBMUD customers.

Comment

Truck trips per day are grossly understated, and contractor should be responsible for any and all damage.

Councilmember DePriester, Moraga Public Hearing

Response

The numbers of truck trips have been revised based on updated information. The numbers were not understated in the DEIR. The construction contractor and ultimately the District will be responsible for repairing the roads to its preconstruction condition.

Comment

The WSMP EIR cannot be certified until the Los Vaqueros EIR is completed and certified.

David Fullerton, Sierra Club, Water Committee

Response

The CEQA Guidelines point out that choosing the precise time for CEQA compliance involves a balancing of competing factors. An EIR should be prepared as early as feasible in the planning process to enable environmental considerations to influence the concept and design of the project and yet late enough to provide meaningful information for environmental assessment. While the Contra Costa Water District will be preparing a Stage II project level EIR for Los Vaqueros, its Stage I EIR was prepared to provide an informed estimate of the environmental consequences of the project. If EBMUD decides that additional terminal storage will be constructed and that a joint project with CCWD at the Los Vaqueros site is the proposed alternative, then that project will not proceed until CCWD's Stage II EIR is completed and certified.

Comment

What is Buckhorn's spillway capacity and where will it flow to?

Aida M. Peterson
Robert H. McClain
Hazel and Paul Shewell

Response

The capacity of the spillway will be designed to carry the probable maximum flood specified by the State Division of Dam Safety, which is an event that could occur less than once in 10,000 years.

Comment

The EIR was written in a style and manner to justify the construction of new terminal storage.

Frank Delfino
Elliot Abers, Moraga Public Hearing
Andrew Cohen, EBMUD Public Hearing
David Fullerton, EBMUD Public Hearing
Helen Burke, Director, EBMUD

Response

The EIR provides an analysis of the environmental effects of the WSMP elements. It contains no arguments for or against the WSMP. The EIR provides the Board with part of the information on which to base their decision.

Comment

There will be legal action against EBMUD if they desire to go ahead with Buckhorn.

R. V. Osmon

Response

Comment noted.

Comment

We recommend initiation of the Section 404 permit process as early as possible.

U.S. Environmental Protection Agency

Response

Comment noted. EBMUD staff have already contacted the U.S. Army Corps of Engineers in this regard.

Comment

If Buckhorn Reservoir is proposed, soils reports and seismic studies should be made available.

Moraga Town Council

Response

Such studies are, and will be, available for public review.

Comment

Can the PG&E transmission lines be relocated on EBMUD property or on other public lands without putting them any closer to existing housing?

Ken Kofman, Director, EBMUD

Response

The lines can be relocated on EBMUD property. The discussion of impacts of transmission line relocation has been expanded.

Comment

Will a new reservoir increase the detention time in all terminal reservoirs and will this increase mineralization and affect health of customers?

Robert H. McClain

Response

A new reservoir would be used for standby in case of outages or droughts and would not affect the routine operation of the existing terminal reservoirs. Therefore, there would be no change in the mineralization of the existing reservoirs. The impacts of storage on water quality are discussed in chapters IV and V of the Technical Report.

Comment

The construction workers may not all come from the Castro Valley Area.

Moraga Town Council

Response

Regardless of where the construction workers for Buckhorn Dam live, they will enter the site from Castro Valley. Pipeline workers will enter from Moraga.

Comment

To what extent would the 295 foot tower be visible?

Councilman DePriester, Moraga Public Hearing

Response

Virtually all of the inlet-outlet tower would be under water. The top of the structure will extend approximately 30 feet above the normal water surface. It would be visible to viewers of the dam and reservoir from some upstream vantage points.

Comment

Page V-15 of Technical Report: Draining of Upper San Leandro: given the concern for outage, can we afford to drain this facility? How will the southern area be served in the interim?

Ken Kofman, Director, EBMUD

Response

The point raised by this comment is recognized in the "Terminal Reservoir Site" Section of the Technical Report. Since USL wasn't designed for expansion, there would be some amount of excavation and restructuring of USL Dam required if the dam was to be raised.

This work would require drainage of USL Reservoir. Such drainage would leave the District susceptible to shortages and outages. This is one of the reasons why expansion of USL and other existing dams was rejected.

Comment

Page 5-27 of EIR, bottom paragraph: Please explain what are the present plans and policies of nearby cities as well as Contra Costa County regarding Pinole and Buckhorn sites.

Ken Kofman, Director, EBMUD

Response

The reservoir sites are not in the spheres of influence of any of the local cities.

Comment

No identification of impacts on the entire Mokelumne system is found anywhere in the DEIR.

Department of Fish and Game

Response

The new terminal reservoir would be kept full and only used during droughts or in the event of rupture of the Mokelumne Aqueducts. The reservoir would be filled from the Mokelumne River during wet years. Minimum release requirements applicable to Pardee and Camanche Reservoirs would be complied with. During reservoir filling, wintertime peak flows in the Mokelumne and the Delta would be reduced. This would not be expected to have a significant adverse impact on the Mokelumne or Delta.

Comment

Why is Buckhorn proposed as a "standby system?" Wouldn't it make more sense to use it as an operational reservoir and thus improve the water quality throughout the District?

Ken Kofman, Director, EBMUD

Response

Buckhorn allows the other reservoirs to be used for regulation of the Mokelumne supply. It is less costly to use Buckhorn as standby storage.

Comment

How often would water in new terminal reservoir be used? What is depth of Briones, San Pablo and Upper San Leandro Reservoirs?

Ken Kofman, Director, EBMUD

Robert H. McClain

Response

It is anticipated Buckhorn may be partially used over the next 100 years during droughts and short-term outages but used completely only once over the next 100 years in the 13-month outage event. The depths of EBMUD's terminal reservoirs are as follows (measured from dam crest to streambed): Briones, 270 feet; San Pablo, 171 feet; and USL, 200 feet.

Comment

From an aesthetic viewpoint, is Buckhorn expected to stay at a relatively constant level?

Questioner, EBMUD Public Meeting

Response

Yes. Buckhorn would be used as standby and would stay at a relatively constant level.

Comment

The water evaporating out of the reservoir during the average 10 normal years exceeds the amount stored during the sub-normal years.

The Ecology Movement

Response

Average annual evaporation would be about 3,000 acre-feet for Buckhorn. Buckhorn would be filled during wet and normal years with Mokelumne River water.

Comment

Why was Buckhorn chosen over Pinole and Los Vaqueros?

Al Silbert

Response

It hasn't been - please refer to "Site Selection" Section of Chapter VI of the Technical Report.

Comment

The impact of noise, safety and congestion on residents of Castro Valley was not addressed.

Susan Adams, EBMUD Public Hearing

Response

Chapter 5 of the revised Draft EIR has been revised to include this issue.

ISSUE 20: SLIDE POTENTIAL AT BUCKHORN

Comments

The hillsides are marked with numerous small landslides.

Charles Mavinovich
R. and F. Keeperman
Tom Buckingham
Elliott Abers
Carl Shanahorn, Moraga Public Hearing
Elliot Abers

What about overtopping at Brown Ranch Road saddle or the dam itself as a result of a slide?

Tom Buckingham
Mary Anna McKinley
Councilmember DePriester, Moraga Public Hearing
Al Silbert
Patricia Martin
F. M. Martin
Steven Thaw, Moraga Public Hearing

Response

The chance of overtopping at the Brown Ranch Road saddle as a result of a slide is low because of the 80-foot difference in elevation between the proposed reservoir level and the saddle elevation. A wave height of 80 feet would be required to overtop this area.

Sinuosity of the reservoir basin would obstruct the wave path generated by a landslide. This obstruction would effectively dissipate the wave height and prevent overtopping of the dam crest unless the Bay slide was extremely large.

ISSUE 21: SEISMIC SAFETY OF CONSTRUCTING BUCKHORN

Comments

There is concern regarding the seismic safety of the dam and aqueduct.

H. and P. Shewell	Roger Reeve
Norma Cuneo	Victor and Edna Gunther
James Cuneo	David A. Thompson
James Blickenstaff	Ronald Rubenstein
West Contra Costa County Gray Panthers	Steve Thaw
R. and F. Keeperman	Jodi Pepper, Dan Malecki, Tony DeBellis
Ralph B. Hogan, Jr.	Golden Gate Audubon Society
Nancy Prickett	Patricia Martin
Frances L. Fleurbaaij	F. M. Martin
Mr. and Mrs. Osmon	Helen Burke, Director, EBMUD
Marjorie Bowman	David Fullerton, Sierra Club, Water
Roger Reeve	Committee
M. and E. Hartman	Leora R. Feeney, Golden Gate Audubon
Edgar Mendelsohn	Society
Marjorie Richman	Ken Kofman, Director, EBMUD
Mary Anna McKinley	Peter Vorster
Margaret Mahoney	William Knecht
W. and M. Thompson	Tom Buckingham
D. and G. Hiatt	Aida M. Peterson
Elliott Abers, Moraga Public Hearing	Robert H. McClain
Carl Shanahorn, Moraga Public Hearing	
Greg Johnson, Moraga Public Hearing	
Jim Sweeney, Moraga Public Hearing	
Councilmember Connors, Moraga Public Hearing	
Councilmember Crossley, Moraga Public Hearing	
Al Silbert	
Carl E. and Jane B. Shanahorn, Moraga Public Hearing	

Response

Refer to Chapter 5 of the revised Draft EIR.

Comment

Page II-13: Technically, the San Andreas Fault earthquake did not "devastate" San Francisco. The resultant fire did.

Ken Kofman, Director, EBMUD

Response

Comment noted. The resulting fires from the 1906 earthquake did devastate San Francisco. However, the earthquake also disrupted the water supply system reducing the available water to fight fires.

Comment

What impact does the "undefined" fault between the Hayward and the Calaveras fault have on the project? This fault again shows signs of activity?

Robert K. Mullen, Moraga Public Hearing

Response

The "undefined" fault between the Hayward and Calaveras faults is the Miller Creek-Moraga fault system. This fault is not considered active by the California Division of Mines and Geology.

Comment

The EIR should explore the impact of increased liability insurance premiums due to building the dam near a major fault.

Edgar Mendelsohn

Response

The entire Bay Area is part of the most active seismic region in the United States. As the majority of EBMUD's facilities are located within this region the District already has extensive commercial liability insurance to guard against catastrophic loss.

Commercial liability insurance premiums are determined by numerous factors, including trends in the market-place. When the underwriters review EBMUD's policy they examine the entire picture, all on-going projects, existing facilities, District-owned vehicles, etc. The addition of one or more reservoir to the policy would therefore not significantly effect EBMUD's premiums.

ISSUE 22: DESTRUCTION OF OPEN SPACES

Comment

Buckhorn Reservoir would mean a permanent loss of a beautiful, scenic open area.

James Sayre, Ecology Action
H. and P. Sewell
West Contra Costa County Gray Panthers
Scott Weston
Ron Rubenstein
Rob Wells
Laura Selfridge, EBMUD Public Hearing
Joseph Hogan, EBMUD Public Hearing
Charles Brydon, EBMUD Public Hearing
Robert K. Mullen, Moraga Public Hearing
Hazel & Paul Shewell
Darlene Lyons

Marjorie Bowman
James Blickenstaff, Sierra Club
Kirk Peterson
Malcolm Sproul
Robert & Julia Skrdla
Aida Peterson
Tom Fuller, EBMUD Public Hearing
Sally McKirgan
Ralph Hogan

Response

Comment noted.

Comment

A large reservoir is an attractive addition.

William Knecht

Response

Opinions differ on the aesthetic value of artificial lakes in the California landscape. Some believe that the introduction of water into a relatively arid landscape adds interest or contrast. Others believe that artificial lakes look unnatural.

Comment

EBMUD violates its own Land Use Management Plan of 1985 which designates the Buckhorn Canyon as Educational Use Area.

Buckhorn Preservation Council

Response

EBMUD's land use plans were developed to guide management of District lands. They were not intended to be unchangeable should the need arise.

Comment

EBMUD is an open space planning agency.

John Burke, Public Hearing

Response

EBMUD has no authority to plan land use. It is responsible for managing its own lands and has an interest in land use decisions within reservoir watersheds.

ISSUE 23: BIOLOGICAL AND ARCHAEOLOGICAL IMPACTS OF BUCKHORN RESERVOIR

Comment

All artifacts found on the Buckhorn site need to be preserved.

John Legarias, Moraga Public Hearing
Maggie Skinner, Moraga Historical Society
Brother L. Dennis, Moraga Historical Society
Anita and Raymond Pender
Tom Buckingham, Public Hearing
Roger Reeve
KenKofman, Director, EBMUD

Response

All artifacts found at the site will be appropriately dealt with and are discussed in Chapter 5 of the revised Draft EIR.

Comment

Impact on Salmo gairdneri should be considered a significant effect or an adverse change in the environment and should be covered in more detail as to size and effect in other tributaries.

Paula Hartman
East Bay Regional Park District
David Fullerton, Sierra Club, Bay Area Chapter Water Committee
Tom Buckingham
Councilmember Connors, Moraga Public Hearing

Response

As noted in Chapter 5, of the DEIR, detailed surveys of the spawning and rearing habitats on the affected creeks have not been done to date. It is recommended in the revised DEIR that additional studies should be conducted to better determine the amount and quality of the spawning habitat that would be affected by the proposed project, and thus the amount and type of mitigation that will be necessary. It is noted that the impacts on Salmo gairdneri could be significant.

Comment

Further study needs to be done on the Chase Oaks.

The California Native Plant Society

Response

As noted in the DEIR, *Quercus* x *chasei* is a hybrid of the more common Coast Live Oak (*Quercus agrifolia*) and the California Black Oak (*Q. kelloggii*). The ranges of these two oaks overlap from southern Mendocino County to San Diego County. Recorded sightings of the hybrid trees are limited. Dr. John Tucker, Ph.D., of the U.C. Davis Botany Department and noted expert on oaks, indicated (phone conversation on 8/15/88) that he was aware of but four or five known locations of this hybrid, all of which are in the northernmost extent of the range overlap in Monterey, Napa, Alameda, and Santa Clara Counties. Dr. Tucker believes that although the hybrid may likely occur in other as yet unrecorded localities, these occurrences are likely to be limited and the hybrid is rare.

As noted in Chapter 5, of the DEIR, the significance of these trees are of a scientific nature rather than as an endangered species. In fact, these hybrid trees are not recognized as a species. The loss of these trees would not jeopardize the continued existence of any species of oak, but do represent a piece of scientific evidence on the taxonomic relationship between the Coast Live and California Black oaks.

Additional populations of this hybrid occur in the U.C. Hastings Reserve in Monterey County. These trees would provide opportunities for further scientific study and preservation.

Comment

Further study is necessary to determine whether potential impacts to rare species are significant. Note typographical errors.

Malcolm Sproul
California Native Plant Society
Councilmember Connors, Moraga Public Hearing
D. and G. Hiatt
F. M. Martin

Response

After further review and consideration, the authors of the DEIR agree with the comment that the only mitigation for the loss of the stand of walnut trees on the Pinole site is avoidance, or no project. This would then be an unavoidable significant adverse impact. The text has been changed to represent this.

The revised DEIR now indicates in Section 5.5.6 that additional surveys are necessary for selected rare species and that the appropriate mitigation measures would have to be developed prior to final approvals of this project.

The noted typographical errors have been corrected in the revised DEIR.

Comment

The DEIR is inadequate in its evaluation of impacts to fish and wildlife resources and habitat. Mitigation measures have not been developed for this either. U.S. Fish and Wildlife Services HEP should be used.

Department of Fish and Game
John Otterman, Buckhorn Preservation Council
Glenn S. Yoshioka, UC Davis Wildlife Biology

Response

EBMUD will be consulting with the U.S. Fish and Wildlife Service, California Department of Fish and Game, and the U.S. Army Corps of Engineers in the development of a detailed mitigation plan and impact assessment. If the agencies agree that a Habitat Evaluation Procedure is needed, then such an analysis shall be conducted. A preliminary mitigation plan is described in Chapter 5 of the revised Draft EIR.

Comment

The following detailed evaluation of changes should be included in the EIR: flow, water quality, and temperature in the Lower Mokelumne, changes in inflow and storage to Camanche Reservoir and impacts on operation of Mokelumne River Fish Installation.

Department of Fish and Game

Response

The proposed new terminal reservoir is not expected to significantly effect the downstream fisheries, water quality, and water temperatures of the Mokelumne River because the only significant water diversions would occur during the wintertime peak flows for a relatively short period of time until the reservoir is initially filled, and these diversions would not reduce the required minimum flow releases for fisheries at either Pardee or Camanche Reservoirs.

Comment

Field surveys of three surveys for all three sites during a limited seasonal period (April to July) is inadequate.

Golden Gate Audubon Society
Malcolm J. Sproul

Response

The field surveys were constrained by schedules and budgets. It was beyond the scope and budget provided for this analysis to conduct a four-season survey. Nonetheless, the surveys conducted are believed to be adequate to represent the potential impacts of the proposed projects, unless otherwise indicated in the revised DEIR.

Comment

Plant and wildlife lists should be separate for each reservoir, not combined.

Golden Gate Audubon Society

Response

A separate list for plant species is provided in the DEIR. The proposed project sites are very similar and, therefore, support many of the same animal species. For the sake of brevity, it was felt that one list would be adequate to represent the fauna on the sites.

The species lists were compiled by the biologists who did the surveys unless otherwise noted.

Comment

The list of species seems to omit the following:

- o Coast Horned Lizard (Phrynosoma coronatum)
- o Rubber Boa (Charina bottal)
- o Sharp-tailed Snake (Contia tenuia)
- o Racer (Coluber constrictor)
- o Night Snake (Hypsiglena torquata)
- o Western Rattlesnake (Crotalus viridis)
- o Spotted Skunk (Spilogale putorius)
- o Badger (Taxidea taxus)
- o Orange-crowned Warbler (Vermivora celata)
- o Luzuli Bunting (Passerina amoena)
- o Horned Lark (Eremophila apesttris)
- o Rufous-crowned Sparrow (Aimophila ruficips)
- o Grasshopper Sparrow (Ammodramus savannorum)

Golden Gate Audubon Society

Response

The species noted in this comment have been added to the species list of Appendix D.

Comment

How would Buckhorn impact the Las Trampas wildlife?

Golden Gate Audubon Society

Response

Expected impacts associated with the displacement of wildlife are addressed in Chapter 5, of the DEIR.

Comment

Loss of riparian habitat has been understated.

Councilmember DePriester, Moraga Public Hearing

Response

The expected impacts from construction of the proposed pipeline upon the limited amount of riparian vegetation in this area was not considered as significant an impact as the loss of riparian habitats due to the construction and inundation of the reservoir.

Comment

How will the blasting affect the nesting and choice of habitat of wildlife in the area?

Moraga Town Council

Response

During project construction, and especially during blasting, many of the wildlife species that are sensitive to noises would not be expected to nest on or near the site. This is expected to be a relatively short-term impact and after construction of the dam is completed, many of these species are expected to repopulate the area, assuming suitable habitat is available.

Comment

Jugland Hindsei, Frililarta agreslia, F. liliacea and Calochortus sulchellius should be looked for at Buckhorn.

Wayne Roderick

Response

The botanical survey was conducted in the spring and early summer months of the year when most of the sensitive plant species listed in Table 5-4 are typically in bloom and identifiable. A winter survey should be conducted for the Western leatherwood, the White fritillary, and the Stink bells when these plants are in bloom. However, given the perennial nature of the Western leatherwood, the fruiting bodies and the leaves would have been observable at the time the field surveys were conducted. In addition, Mr. Neil Havlick (ex-botanist for the East Bay Regional Parks District) reported that he had not found the Western leatherwood at either the Buckhorn or Pinole sites in the past.

The sensitivity and significance of the riparian habitats at both sites is noted in Chapter 5 of the DEIR.

The Northern California Black Walnut (Juglans Hindsii), Western leatherwood (Dirca occidentalis), and the Mt. Diablo fairy lantern (Calochortus pulchellus) are all discussed in the DEIR in Chapter 5.

The impacts and mitigation measures associated with the Los Vaqueros site are discussed in Chapter 5 of the EIR.

Comment

Blasting affects people and wildlife.

Sally McKirgan

Response

Please refer to the Noise Section of the DEIR in relation to the expected impacts of construction noise on people. As noted above wildlife will leave its area during construction but will return once it is complete provided suitable habitat remains.

Comment

Lake Buckhorn will kill the region's wild character.

Rob Wells

Response

Comment noted.

Comment

Salmo gairdneri (p. 5-76) is not a landmark. Please revise.

East Bay Regional Park District

Response

The text has been revised in response to this comment.

Comment

Endangered species list in the EIR is incomplete.

Elliott Abers, Moraga Public Hearing

Response

This comment is noted. The list of sensitive species has been revised to include two additional plants. Surveys for these plants will need to be completed prior to final approvals of the project.

Comment

It is our presumption that additional environmental review will be undertaken if a reservoir is selected for further analysis.

LAFCO

Peter Vorster, Public Meeting

Victor and Edna Gunther

Response

If Buckhorn or Pinole is approved, no further environmental documentation will be necessary. If Los Vaqueros is approved, subsequent documentation will be necessary.

Comment

No identification of impacts on fisheries resources of the Mokelumne have been made.

Department of Fish and Game

Response

Whichever terminal reservoir site is selected, it is EBMUD's intention to use the additional terminal storage during drought conditions or in an emergency in the event of a disruption of the Mokelumne Aqueduct. When the dam is completed the reservoir will be filled by diverting water from Pardee Reservoir. This diverted water will be available water in excess of the required minimum releases for fisheries down the Mokelumne River from both Pardee and Camanche Reservoirs. Operations of the new terminal reservoir will not involve routine draw downs, thus the majority of the water diversion would occur in the initial period it takes to fill the reservoir. Subsequent diversions to the new terminal reservoir would normally be limited to the amount necessary to maintain the level of the reservoir. Significant changes in the flows in the downstream portions of the Mokelumne River are not expected for an extended period of time and thus no significant effects to the fisheries are expected.

Comment

The plant list (Appendix DI) does not include Poison Oak.

Comment

Not all of the potential habitat for the Alameda striped racer is listed and the survey for this species was not sufficient to determine its presence or absence.

Carol Schemmerling, Urban Creeks Council

Response

The text has been revised to reflect the concerns of this comment.

Comment

The Black-shoulder kite and Rainbow trout habitat on the Buckhorn site should be considered significant. Level of survey is inadequate for this habitat and also Cooper's hawk, Red-legged frog, and Western leatherwood shrub.

Carol Schemmerling, Urban Creeks Council

Response

The EIR identifies the loss of riparian habitat as significant, requiring mitigation as noted in the Mitigation Section of the Biology Chapter.

Although it is recognized that the loss of the grassland habitat would be an adverse impact to many of the raptor species in the area, this is not expected to be a significant adverse impact due to the fact that grassland habitats are not of limited extent in California.

The loss of nesting habitat for the Northern Harrier is the principal reason for the decline of this bird in California. This hawk nests in marshlands and in nearby grasslands. The proposed reservoir could increase marsh habitats on the margins of the reservoir, especially at the upper reaches.

Surveys conducted for all the wildlife species, except for the Alameda striped racer, are believed to be adequate in defining the potential impacts of the proposed project. The DEIR calls for additional surveys for the Western leatherwood and the Alameda striped racer. Surveys for additional rare plant species have been added to the revised DEIR.

As noted in the DEIR on Page 5-90, accurate data on the use of Kaiser and Buckhorn Creeks relative to the other tributary creeks for spawning by the resident trout is not available and thus the significance of this impact is difficult to assess. It is estimated that these creeks support approximately 10% of the trout spawning activity in the Upper San Lorenzo Reservoir watershed (Peter Alexander, EBRP fisheries biologist, phone conversation on 9/15/88). Additional studies should be conducted to better determine the relative importance of these creeks to fish spawning in the watershed.

There is no other "value" attributed to this population of trout at this time, beyond its scientific values. At this point in time, Salmo irideus is not recognized as a rare, threatened, or endangered species by either the State of California or the U.S. Department of Interior. In fact there are many populations of native rainbow trout in the state (Peter Alexander, fisheries biologist EBRP, phone conversation on 8/15/88).

Comment

The report is inadequate in its assessment of wetland impacts.

Carol Schemmerling, Urban Creeks Council

Response

A wetlands delineation was not conducted on this project as suggested by the comment. This delineation will have to be prepared during the 404 permit process with the Corps of Engineers.

Comment

The mitigation of the impact on the terrestrial and aquatic habitats is not clear.

Carol Schemmerling, Urban Creeks Council

Response

A preliminary mitigation plan is described in Chapter 5 of the revised Draft EIR.

Comment

Page 5-79 of EIR: Endangered species: Please identify which of the proposed reservoirs are impacted by table 5-4 and which are not.

Ken Kofman, Director, EBMUD

Response

All of the rare, threatened and/or endangered species listed in Table 5-4 of the Draft EIR could occur at either of the two proposed terminal reservoir sites. A discussion of the potential occurrence of each of the listed species at each site is provided in the notes on Table 5-4 or in the text.

ISSUE 24: GROWTH INDUCEMENT

Comment

Construction of additional storage will mainly serve as growth inducement for more housing and businesses.

David Fullerton, EBMUD Public Hearing	Patricia Martin
Tom Hedges, EBMUD Public Hearing	F. M. Martin
Michael J. Vandeman	Robert and Julia Skrdla
Al Silbert	Scott Weston
Doris Sloan	

Response

Comment noted. The relationship between water supply expansion and growth is discussed in Chapter 10 of the EIR.

Comment

The WSMP is an over-kill or cover-up for expansion of the District's territory.

H. and P. Shewell

Response

Comment noted.

Comment

Can't EBMUD use its influence with city governments to restrain growth? Availability of water may influence land use decisions.

Audrey Sayre
Don Peralta
Walter Hale
Bay Area Air Quality Management District
Al Silbert
Doris Sloan

Response

As noted in the EIR, EBMUD has no control over City or County land use and growth policies, but it has an obligation to serve the growth that results. The District takes no position on whether growth is desirable or not, although individual Board members obviously have their own opinions on the subject.

Comment

Growth inducing impacts were not discussed or adequately addressed.

James Blickenstaff

Stuart L. Somach, McDonough, Holland & Allen, Attorneys

David Fullerton, Sierra Club, Water Committee

Al Silbert

Response

Comment noted. CEQA requires that potential growth-inducing actions be discussed in an EIR. This is done in Chapter 10.

Comment

If the reservoir is being built for growth, I'm against it.

Candice Berthrong

M. and E. Hartman

Response

Comment noted. One of the purposes of the terminal reservoir is to provide water to meet the increased demand for water expected in the future and to meet security needs.

Comment

Buckhorn will cause growth.

Patricia Burke, EBMUD Public Hearing

Tom Hedges, EBMUD Public Hearing

Mathew Blumentahl, EBMUD Public Hearing

Greg Johnson, Moraga Public Hearing

The Ecology Movement

Response

Comment noted. Construction of a new terminal reservoir would eliminate an obstacle to growth.

Comment

Page 2-17 of EIR: Potential for growth-inducement. This section is unclear as to how much additional mgd is needed. Also proposed conservation and reclamation measures only achieving 12 mgd appear to be understated.

Ken Kofman, Director, EBMUD

Response

The text has been revised to improve clarity. The value of 12 MGD is incorrect. It should be 8.3 MGD. At present conservation and reclamation efforts save an estimate 4 and 3.9 MGD of potable water, respectively. Implementation of the WSMP would conserve an additional 3 MGD and reclaim about 5.3 MGD. The latter is comprised of 4.7 MGD at Chevron, 0.15 MGD at Galbraith Golf Course and 0.45 MGD at Alameda Golf Course. If a number of other projects now being investigated prove feasible, then the amount of wastewater reclaimed could increase further.

Comment

Chapter 11 of the draft EIR mentions "a more secure water supply for one to two million people." Is that a project of growth?

Ora Huth, League of Women Voters

Response

No. It is misleading and has been corrected.

Comment

It could be argued that existing facilities meet current standby storage and that the new facilities are only for future growth.

Robert H. McClain

Response

Comment noted. The new facilities would provide existing customers with water in an aqueduct outage.

Comment

We are requiring ourselves to approve future hookups in order that existing customers do not end up paying the whole cost of the reservoir.

John Woodburg

Response

If future hook-ups do not occur at the projected rate, then a greater share of the cost would have to be borne by existing customers.

Comment

Security measures should be separate from reservoirs in WSMP because security measures are not growth inducing.

Response

Chapter 4 of the Revised Draft EIR discusses several alternatives that would increase the security of the water supply but would not provide any water for growth. Chapter 10 discusses the relationship between water supply and growth.

Comment

Since new customers are expected to pay the bulk of the new reservoir costs, this is a growth inducing impact.

John Woodburg, East Bay League of Conservation Voters, EBMUD Public Hearing

Response

Comment noted, but disagree with the logic. If local governments allow construction of new homes and businesses in the EBMUD service area, the District is obligated to provide water to them.

ISSUE 25: CUMULATIVE IMPACTS

Comment

Cumulative impacts were not adequately addressed.

Buckhorn Preservation Council
California Native Plant Society
David Fullerton, Public Hearing
Helen Burke, Director, EBMUD

Response

Cumulative impacts are discussed in the EIR in two places. Chapter 10 discusses the cumulative effects of growth in the service area. Other aspects of the cumulative effects of WSMP are discussed in Chapter 11.

Comment

Future projects need to be analyzed in this EIR. These projects could include future expansions of local storage, fourth Mokelumne Aqueduct, or Southern Aqueduct.

David Fullerton, Sierra Club, Water Committee

Response

Chapter 11 has been expanded to take account of some of the possibilities referred to.

Comment

Need to address cumulative impacts of increased water reduction efforts.

Ken Kofman, Director, EBMUD

Response

A discussion of water conservation has been added to Chapter 11.

Comment

Buckhorn reservoir may look good on the drafting table, but it ignores the cumulative impacts to thousands of people.

Susan Adams

Response

Comment noted. Almost no one will be adversely affected by operation of a new terminal reservoir although there will be inconvenience to varying degrees during its construction.

Comment

It is disturbing that the same document stating that saltwater intrusion into the Delta makes Delta water unsuitable for EBMUD use, fails to recognize that it is withdrawal from rivers such as the American and the Mokelumne that cause the intrusion in the first place.

Paula Hartman

Response

Serious salt water intrusion into the Delta could occur if earthquake or high water levels caused levees to fail and Delta islands to flood. With the Mokelumne Aqueducts out-of-service, EBMUD probably would not be able to use Delta water because of its high salinity. This is the circumstance discussed in the EIR.

Under normal conditions the salinity of Delta waters varies with the volume of freshwater outflow from the Sacramento and San Joaquin Rivers but usually remains in the range that is suitable for drinking water. This was not the case historically. In the past, salt water intruded far into the Delta during dry years. Now that many reservoirs are located on the rivers feeding the Delta, a portion of the wintertime flows are stored and released in the summer to maintain low salinity in the Delta. EBMUD's diversion from the Mokelumne River does deplete flow to the Delta but salinity intrusion does not result for the reason noted.

Comment

What will be the cumulative impacts on residents, public services, and the environment in Alameda and Contra Costa counties of continuing to provide water for new developments planned and approved by local governments?

Ora Huth, League of Women Voters

Response

Chapter 10 discusses the cumulative effects of growth in Alameda and Contra Costa Counties. Traffic congestion will become more severe, air quality may deteriorate and open space will be converted to urban uses. None of these changes can be solely attributed to provision of water supply. They are more directly the consequences of the land use management practices of local government.

Comment

Where are the environmental, financial and growth impacts for all these projects?

David Fullerton, EBMUD Public Hearing

Response

Information on project financing is contained in the Technical Report.

Comment

Ignoring cumulative impacts is against CEQA guidelines.

David Fullerton, EBMUD Public Hearing

Response

As noted above, cumulative impacts are discussed in Chapters 10 and 11 of the EIR.

ISSUE 26: BENEFICIAL IMPACTS

Comment

The WSMP did not adequately address the beneficial impacts.

Omar Chatty

If Buckhorn is built, we urge the District to provide appropriate recreational access.

City of San Ramon

Buckhorn should never be used for recreational purposes.

Moraga Town Council

Are Buckhorn and/or Pinole proposed for water recreation uses and if not, why?

Ken Kofman, Director, EBMUD

Response

Currently, there are no plans for water recreation at either Pinole or Buckhorn. A possible plan for water recreation at Upper San Leandro Reservoir is included in Appendix E of the EIR.

ISSUE 27: MITIGATION

Comment

Who would be responsible for monitoring mitigation measures?

H. and P. Shewell

Response

In general, it will be EBMUD's responsibility to ensure that the agreed-on mitigation measures are implemented. The need for monitoring will vary depending on the nature of the mitigation measures. Some mitigation measures will be built into the project; for example, architectural and landscaping treatment of the Buckhorn pump station. EBMUD construction inspectors will check that the contractor completes the facilities in accordance with plans and specifications. Likewise, contractor compliance with mitigation measures to minimize construction impacts will be monitored by EBMUD construction inspectors. The success of some mitigation measures such as riparian habitat replacement may be monitored by wildlife agencies.

Comment

EBMUD should not put the burden of mitigation on the Department of Fish and Game and the U.S. Fish and Wildlife.

Frank Delfino

Response

EBMUD has developed a conceptual program to mitigate the impacts of reservoir construction on wildlife and wildlife habitat. The District will seek the advice and concurrence of wildlife agencies when it finalizes its mitigation plans.

Comment

Mitigation was not adequately addressed for replacement of lost riparian habitat.

Buckhorn Preservation Council
Department of Fish and Game
Golden Gate Audubon Society
Ora Huth, League of Women Voters
Malcolm J. Sproul
David Fullerton, Sierra Club, Bay Chapter Water Committee

Response

A conceptual program to mitigate for lost riparian habitat is discussed in Section 5-5 of the EIR. The program would be finalized on consultation with wildlife agencies.

Comment

What mitigation is proposed to assure the integrity of Moraga Way?

William J. Dabel, Mayor of Orinda

Response

When construction is complete, the surface, landscaping and street furniture of Moraga Way would be restored to its pre-construction condition. This provision would be written into the pipeline construction contracts.

Comment

How will vehicular, bicycle, and pedestrian safety be ensured?

William J. Dabel, Mayor of Orinda

Response

Contractors would be required to make provision for vehicular, pedestrian and bicycle traffic during pipeline construction. Warning signage and night lighting of construction areas would be provided to minimize safety hazards.

Comment

How will truck traffic noise be mitigated?

William J. Dabel, Mayor of Orinda

Response

The nuisance caused by truck noise would be lessened by requiring proper muffling of all trucks accessing the construction site and by scheduling truck traffic during the normal working day. No truck movements would be permitted at night or during weekends.

Comment

What about mitigation on Lafayette streets?

Robert Adams

Response

Traffic through Lafayette may be increased for one month when pipeline construction is occurring on St. Mary's Road in Moraga impacts are thought to be too minor to require mitigation.

Comment

Who gets to pay for property damage caused by construction?

R. V. Osmon

Response

EBMUD and its contractors would be responsible for repairing any damage caused by construction activities. Restoration of street surfaces, landscaping and street furniture would be a part of the pipeline construction contracts.

Comments

Preservation of a similar strand of Black Walnut is not considered mitigation.

California Native Plant Society

Response

We agree. The EIR has been revised accordingly.

A wetland mitigation plan should be developed to meet the no net loss objective, subject to the review and approval of the Department of Fish and Game.

Response

A preliminary mitigation plan is discussed in Section 5-5 of the EIR.

Department of Fish and Game

Mitigation for adverse impacts on trout fishery could be augmented as follows:

- o Increase spawning habitat in the east and west forks of Redwood Creek and Upper San Leandro Creek by increasing the size and frequency of pools and by placement of appropriate spawning gravel.
- o Remove barriers where Upper San Leandro Creek crosses Pinehurst Road and where Canyon Road crosses Indian Creek.
- o Those measures which could be carried out on EBRPD property are consistent with the adopted Natural Resource Management Plans for Redwood Regional Park, Huckleberry Regional Preserve and Sibley Volcanic Regional Preserve.

East Bay Regional Park District

Response

These mitigation measures have been included in the Revised Draft EIR, Chapter 5.

Comment

I am concerned about the quality of repaving along the pipeline route.

Carl Shanahorn, Moraga Public Meeting

Response

Specifications for repaving of street surfaces after pipeline construction would be developed in consultation with the affected jurisdictions. It is the District's intent to restore street surfaces to at least their pre-construction condition. This would be achieved by repaving entire traffic lanes, rather than by patching.

Comment

EIR assumes impacts are minor and can be easily mitigated.

Moraga Citizen, Moraga Public Hearing

Response

Construction impacts in Moraga were judged to be relatively minor and mitigable to an acceptable level because they would be of short duration (less than one year).

Comment

Carpooling and vanpooling aren't always that successful.

Councilmember Connors, Moraga Public Hearing

Response

As the commenter notes, voluntary car or vanpooling is often unsuccessful. Because the District can require its contractors to provide satellite parking and vanpooling as a condition of the contract, it is expected that it would be successful. The traffic analysis in the EIR assumed only a modest level of carpooling. An aggressive carpooling program would reduce trip numbers below the EIR assumption.

Comment

What is the feasibility of the proposed mitigations?

Councilmember Connors, Moraga Public Hearing

Response

Only mitigation measures thought to be reasonably feasible are suggested.

Comment

Does EBMUD plan to provide funds for a policeman to police the truck drivers and for scales to weigh the trucks?

Councilmember Crossley, Moraga Public Hearing

Response

No. Policing will be done by EBMUD construction inspectors.

Coment

Who will be responsible for controlling the weight, speeds, and dust of the haulage vehicles?

Karl E. & Jane B. Shanahorn
Hazel & Paul Shewell

Response

EBMUD construction inspectors will monitor contractors compliance with all contract conditions including those designed to mitigate environmental impacts.

Comment

Isn't "a conceptual mitigation program" needed as part of this EIR, rather than later on?

Ken Kofman, Director, EBMUD

Response

Additional detail on the biological impact mitigation plan has been added to Section 5.5 of the Revised Draft EIR. Developing a final plan will take several months and will require consultation with wildlife agencies.

Comment

Buckhorn site mitigation. Why shouldn't a temporary concrete plant be built on site?

Ken Kofman, Director, EBMUD

Response

Little concrete would be used for dam construction. It is probably most economic to truck in ready-mix concrete for inlet and outlet tower and other structures.

Comment

Impacts are understated. Mitigation measures inadequate.

Mary Anna McKinley
Mayor Kendall, Moraga Public Hearing
Marjorie Richman

Response

Comment noted.

Comment

Riparian habitat mitigation was not presented.

Carol Schemmerling, Urban Creeks Council

Response

Preliminary mitigation measures for loss of riparian habitat are discussed in Section 5.5 of the Revised Draft EIR. Final mitigation plans will be developed in consultation with wildlife agencies.

Comment

The construction traffic impacts to Moraga Way should be studied as well.

William Dabel, Mayor of Orinda

Response

Impacts to Moraga Way are discussed in Section 5-6 of the EIR.

Comment

Converting a riparian habitat to a lake bottom does not increase the in-kind wetland acreage or its value.

Frank G. Delfino

Response

We agree. Enhancement of other presently degraded riparian areas is the main feature of the conceptual riparian mitigation plan.

Comment

All riparian and stream mitigation measures must be in place and working before any construction begins.

Frank G. Delfino

Response

Commented noted. To the extent possible this will be done, but some elements of the mitigation plan may take years to become fully effective.

Comment

What would be the alignment of the potential mitigation direct access road to Canyon Road south of Camino Pablo?

William J. Dabel, Mayor of Orinda

Response

This mitigation has not been developed in detail. Instead emphasis has been placed on developing a construction plan that would lessen impacts on Camino Pablo in other ways. Alternative pipeline alignments are also discussed in Section 5-12 of the Draft EIR.

Comment

Mitigation should include acquisition of new watershed lands such as Indian Creek.

Malcolm J. Sproul

Response

Comment noted. The WSMP includes the acquisition of several thousand acres of new watershed lands.

Comment

A general mitigation measure should be added which states that mitigation will be provided to all species impacted by the project.

Malcolm J. Sproul

Response

Commented noted. If the loss of riparian vegetation is mitigated effectively it will benefit most of the affected wildlife species.

Comment

Discussion of mitigation measures is hopelessly vague and incomplete.

Sierra Club

Response

The mitigation measures for impacts on biological resources have been developed in more detail as discussed in Section 5-5 of the EIR. A further level of detail will be developed in consultation with wildlife agencies.

ISSUE 28: COST ALLOCATION OF BUCKHORN RESERVOIR

Comment

There were several comments and questions regarding the cost allocation of the reservoir.

Questioner at Public Meeting

Robert H. McClain

Ken Kofman, Director, EBMUD

Mr. & Mrs. Osmon

Roger Reeve

Phillip Levine, Public Hearing

Al Silbert

Sierra Club

John Woodburg, East Bay League of Conservation Voters, Public Hearing

Response

Without additional storage, existing customers and new customers will experience undue hardship during a shortage or outage supply. Because both existing customers as well as new customers will benefit from additional storage, the cost of the reservoir would be allocated based on the anticipated usage by each. New customers will be expected to pay 57 percent of the cost through an increase in the system capacity charge (SCC) as well as an increase in water rates. The net results of the allocation of costs to existing and new customers is shown in Chapter V of the Technical Report.

ISSUE 29: ALTERNATIVES TO THE BUCKHORN SITE

Comment

Give Pinole and Los Vaqueros the same consideration as Buckhorn.

Mary Prickett

R. V. Osmon

W. and M. Thompson

Ralph Hogan

Aida M. Peterson

Councilmember Connors, Moraga Public Hearing

Nancy Prickett

Anita and Raymond Pender

Greg Johnson, Moraga Public Hearing

William and Helen Rees

Sally McKirgan

Gregory Johnson, EBMUD Public Hearing

Zoe Klippert

Edgar Mendelshn

Anthony Fisher

Stuart L. Somach, McDonough, Holland, & Allen, Attorneys

David Fullerton, Sierra Club, Bay Chapter Water Committee

Peter Vorster

Response

Refer to Chapter V of the revised Technical Report.

Comment

What about enlarging Briones?

Elliott Abers, Public Hearing

Robert K. Mullen, Moraga Public Meeting

Response

Refer to Chapter V of the Technical Report.

PINOLE SITE IMPACTS

ISSUE 30: IMPACT OF PINOLE RESERVOIR

Comment

It is highly unlikely that EBMUD would obtain a permit to use Pinole Valley Road.

Donald Bradley, City of Pinole

Response

Comment noted.

Comment

There is concern over the noise created by the construction of Pinole working three shifts per day.

Donald Bradley, City of Pinole

Response

The District plans to limit construction work to daylight hours. Work will probably be limited to a single shift.

Comment

The City of Pinole strongly urges assurance that the possibility of dam failure is minimized.

Donald Bradley, City of Pinole

Response

The dam would have to be sited and engineered in accordance with the requirements of the California Department of Water Resources, Division of Safety of Dams. No large dam meeting the division's current requirements has ever failed although many have been subject to earthquakes of varying magnitude.

Comment

Who will benefit from Pinole Reservoir?

Donald Bradley, City of Pinole

Response

All consumers of EBMUD water will benefit from the increased security in the event of an aqueduct outage that would result from Pinole Reservoir. Future customers will, in addition, benefit from the District's ability to supply water to meet the future needs of growing communities in the service area.

Comment

What is the meaning of the sentence on page 5-91 which reads "The frequent truck traffic along Castro Ranch Road is not expected to disturb the geese...."

Councilmember Connors, Moraga Public Hearing

Response

There is a sensitive species of Aleutian Canadian goose located at the Pinole site. The geese would be expected to be disturbed by sudden, infrequent loud noises such as would be produced by blasting. The more continuous rumble of traffic noise would be less troubling to them. While truck traffic is not expected to disturb the wildlife, every effort will be made to schedule construction around their presence if Pinole Reservoir is built.

Comment

Why does Pinole have more dead storage than Buckhorn when it is actually a smaller reservoir?

Robert H. McClain

Response

The dead storage at Pinole is determined by the inlet elevation at the Sobrante Filter Plant (250'). The amount of dead storage at Buckhorn is determined by the elevation at King Canyon (470').

Comment

Pinole Reservoir: Why can't the reservoir be filled directly with Mokelumne water? And why can't, at the same time, the system be upgraded so that people in the Richmond area would have access to Mokelumne water rather than just taking from San Pablo Dam?

Ken Kofman, Director, EBMUD

Response

Filling Pinole Reservoir directly with Mokelumne water would require conveyance facilities to link the reservoir with the Mokelumne Aqueducts and the filter plants. Directly filling Pinole Reservoir would avoid mixing the Mokelumne San Pablo waters. However, taste and odor problems in the summertime are due principally to a reservoir's relatively shallow depth, and urban runoff. Pinole Reservoir would be relatively shallow, filling it directly with Mokelumne water would not ensure a higher water quality.

While all of EBMUD's treated water surpasses both state and federal standards, even the water from San Pablo and Upper San Leandro Reservoirs, the District is continually upgrading its water treatment program. In response to the taste and odor problems at the Sobrante and Upper San Leandro Filter Plants, EBMUD is currently replacing the existing sand filter media with granular activated carbon and constructing ozone treatment facilities. Another measure recommended in the Water Supply Management Program which would improve water quality is to purchase watershed lands which have a potential for development.

Comment

Figure on page V-21 indicates that 40 MGD will be pumped from Pinole Pumping Plant to Sobrante Filter Plant. Can the water be pumped from San Pablo Pumping Plant? Why is hydraulic head raised 110 higher than needed?

Robert H. McClain

Response

Water from Pinole can be fed into either San Pablo Filter Plant or Sobrante Filter Plant. Currently, Sobrante Filter Plant is fed by San Pablo Reservoir.

Comment

Page 5-17 of EIR: Why is Castro Road shown as the only route for the proposed aqueduct?

Ken Kofman, Director, EBMUD

Response

Castro Road was not the only route considered. Please refer to Chapter V of the revised Technical Report and Section 5.12 of the Revised Draft EIR.

Comment

Page 5-27 of EIR, bottom paragraph: Please explain what are the present plans and policies of nearby cities as well as Contra Costa County regarding Pinole and Buckhorn sites.

Ken Kofman, Director, EBMUD

Response

Buckhorn and Pinole do not lie in the sphere of influence of nearby cities and counties.

Comment

The destruction of the Western Pond Turtle and Black-Shouldered Kite habitat should be significant.

Carol Schemerling, Urban Creeks Council

Response

Comment noted, see Section 5.5 of Revised Draft EIR for a discussion of possible impacts. The mitigation measure for the Western Pond Turtle has been modified to include temporary storage and return to the Pinole site after construction is complete.

Comment

There are reports of potential odor and taste problems associated with the Pinole Reservoir site. Would only Pinole Reservoir water be used in West Contra Costa County or would it be blended with Mokelumne water?

Donald Bradley, City of Pinole

Response

Pinole Reservoir if built would serve the northern part of the District's service area. Pinole would be filled from San Pablo Reservoir which is filled with Mokelumne water. Water from Pinole Reservoir would be fed into San Pablo and Sobrante Filter Plants.

ISSUE 31: BIOLOGICAL AND ARCHAEOLOGICAL IMPACTS AT PINOLE

Comments

Archaeological resources: Need for formal archaeological scrutiny would appear to be a prerequisite before a project can be determined, rather than just as a "mitigation" measure.

Ken Kofman, Director, EBMUD

Response

An archeological reconnaissance survey was thought to be the appropriate level of effort until a single reservoir site is chosen. Nothing was found during the surveys at Buckhorn and Pinole that would threaten the feasibility of a reservoir at these sites. Thorough investigation and recording of the sites found would be an appropriate mitigation measure before a dam is built.

Comment

Page 5-79 of EIR: Endangered species: Please identify which of the proposed reservoirs are impacted by table 5-4 and which are not.

Ken Kofman, Director, EBMUD

Response

The potentially sensitive species are similar for the two sites. Differences are discussed in the text and table notes.

Comment

The Northern California Black Walnut Tree should be carefully studied.

Donald Bradley, City of Pinole

Response

Comment noted. We agree. If shown to be native the loss of Northern California Black Walnut trees would be significant.

LOS VAQUEROS SITE

ISSUE 32: LOS VAQUEROS SITE RESERVOIR

Comment

Of all the reservoir site alternatives, Los Vaqueros has the greatest environmental impact on rare and endangered species. They should be protected.

Wayne Roderick

Response

Comment noted.

Comment

On page 5-28, acquisition of private property for a Los Vaqueros Reservoir is described as "a significant adverse impact...which would only be partly mitigated...". Contra Costa Water District believes that it can be fully mitigated.

John Gregg, Los Vaqueros

Response

Comment noted. The passage referred to was abstracted from the Draft Stage 1 Los Vaqueros/Kellogg Project EIR, prepared for CCWD.

Comment

Environmental documentation for Los Vaqueros was not included.

Councilmember Crossley, Moraga Public Hearing

Response

The separate EIR on Los Vaqueros prepared by Contra Costa County Water District is included by reference.

Comment

Table 5-5 should include Los Vaqueros impacts as well.

Stuart Somach: McDonough, Holland & Allen, Attorneys

Response

Only summary discussions of Los Vaqueros are included in each EIR section. The commentor is referred to the Los Vaqueros EIR.

Comment

Since Los Vaqueros is considered an option, certification must wait until the Los Vaqueros EIR is certified.

David Fullerton, Sierra Club, Bay Chapter Water Committee

Response

The Los Vaqueros Project was addressed in a separate EIR prepared by Contra Costa County Water District. That EIR was included by reference in the Water Supply Management Plan and its findings summarized therein. The Los Vaqueros Stage 1 EIR can be reviewed at either the EBMUD or CCCWD offices. A second EIR is in preparation at this time.

Comment

The referenced DEIR on the Los Vaqueros alternative has not been received. Consequently no evaluation of potential impacts or adequacy of mitigation measures can be made.

Department of Fish and Game

Response

See response to previous comments.

Comment

Page 5-154 of DEIR: Dam-break wave progression Table 5-7: What about Los Vaqueros?

Ken Kofman, Director, EBMUD

Response

No dam break analysis of a Los Vaqueros Project has been undertaken to date. Such an analysis will be performed as part of the Stage 2 studies by Contra Costa County Water District.

Comment

Los Vaqueros Reservoir was not included in the EIR and should have an in-depth analysis.

James Blickenstaff
Al Silbert
Aida M. Peterson
Ora Huth, League of Women Voters
Hazel & Paul Shewell
Councilmember Crosby, Moraga Public Hearing

Response

See response to prior comments.

Comment

Los Vaqueros Reservoir would seem to be a better alternative than Buckhorn because it is large enough to meet future demands.

Anthony Fisher
Edgar Mendelsohn
W. and H. Rees

Response

Comment noted. Both reservoirs would be sized to satisfy projected demand through the year 2020 or shortly thereafter. Both could be enlarged.

Comment

Los Vaqueros Reservoir would be less costly than Buckhorn as terminal storage.

Al Silbert

Response

This does not appear to be the case. See Appendix B of the Technical Report. The cost of construction of EBMUD's share of Los Vaqueros would be about 15% higher than that of Buckhorn.

Comment

Page 5-11 of EIR: Los Vaqueros: Last sentence is incorrect. CCWD does not "presently purchase" surplus water; rather it intends to do so once its EIR is done.

Ken Kofman, Director, EBMUD

Response

Comment noted. The text has been revised accordingly.

Comment

Quality of water in Los Vaqueros reservoir was not adequately covered.

Vice Mayor Dessayer, Moraga Public Hearing

Response

The District has indicated that if it was to share a Los Vaqueros Reservoir with Contra Costa County Water District then the reservoir would have to contain Sierra rather than Delta water. The Sierra water would likely be from the Mokelumne or American Rivers and would be comparable in quality with EBMUD's present supply.

Comment

On the Los Vaqueros site the additional surveys recommended should not be considered a form of mitigation.

Carol Schemmerling, Urban Creeks Council

Response

A second phase of studies of Los Vaqueros are in progress including those listed as mitigation measures in the Stage 1 EIR. Actual mitigation measures will be developed as part of the Stage 2 studies.

Comment

Why do the operational grade lines for Los Vaqueros appear to be based on greater flow rates in a smaller pipe than for the Buckhorn project?

Tom Buckingham

Response

As configured by CCWD, pumping will be required to fill and drain Los Vaqueros thereby decreasing the pipe size.

Comment

Why would Los Vaqueros cost us more if we would be working together with CCWD?

Peter Vorster, EBMUD Public Hearing

Response

The cost of Los Vaqueros would be split proportionately based on allocation of reservoir volume to each agency. Land costs are higher for the Los Vaqueros project, but the costs constructing Los Vaqueros are comparable to the cost of Buckhorn.

SOURCE PROTECTION

ISSUE 33: PROTECTION OF SOURCE

Comment

What is watershed enhancement?

Frank Delfino

Response

Watershed enhancement is a collection of measures aimed at minimizing pollution of water in EBMUD's reservoirs from the respective watersheds. It principally includes the purchase of 5,000 acres of land to add to the present watershed of 20,000 acres but also includes watershed reconnaissance, vegetation control, erosion control and control of adjacent land uses. As part of the WSMP, it includes purchase of land which may have the potential for development. Further details on watershed enhancement are presented in Chapter IV of the Technical Report.

Comment

If Buckhorn is built, what happens to the Pinole site?

Donald Bradley, City of Pinole

Response

The Pinole site will continue to be managed as it is now unless new plans are developed for it by the District. Should the District need more reservoirs in the future, it could be considered at that time.

Comment

If public lands are acquired, the water sphere of influence will be requested to be modified and the lands annexed to the District. This needs to be covered in appropriate environmental documentation.

LAFCO

Response

Comment noted.

Comment

Water quality protection: Acquisition is not the only way to protect the watershed. Zoning, purchase of development rights, etc., should be included.

Ken Kofman, Director, EBMUD.

Response

These are options but full control of the watershed would be provided by public ownership.

MAY 18, 1988 STAFF HEARING ON WSMP & TECHNICAL REPORT

TAPE ONE, SIDE ONE

TAPE LEAD-IN: This is the May 18, 1988, staff conducted public hearing on the EBMUD Water Supply Management Program.

GILBERT: I'd like to welcome you this evening on behalf of the District to the first of a series of meetings in connection with the Water Supply Management Program. We're here tonight to hear your comments, to answer questions and to begin with an initial presentation of the program. There will be a second public hearing that is scheduled on this subject a week from tonight at the Kaiser Center Auditorium. The deadline for submitting written comments to be included in the record of this process for formal review of the Environmental Impact Report is June 17th. I'll be making a few introductory remarks. My name is Jerry Gilbert. I'm the General Manager of the District. I'd like to introduce this evening Director Ken Kofman, who is Vice President of the Board, back here; and in a moment I'll introduce Richard Kolm to my left, who will be making about a 20 minute presentation on the scope of the Water Supply Management Plan. The purpose of his presentation is to describe the problems and alternatives and the proposed solutions related to security of the water supply system, shortages in time of drought and health and safety issues related to water quality.

Following that presentation, we'll have a brief break. We'll give you some time to fill out presentation cards which we use to keep a formal record. They're located here and we'll pass

them out, and then you will have an opportunity to make your comments. We are recording all of the comments this evening. The oral comments, as well as those made on the 25th, and those made at the-- in the written comment phase up to June 17th, will also be part of the official record that the Board will consider when it acts on the Water Supply Management Plan recommendations. There may be additional hearings that will be scheduled. But that is up to the Board of Directors, and they will judge that after the meeting of the 25th.

We will try to respond to any questions you have regarding clarifications, but comments that require review and investigation will be responded to in the final reports so that we have some time to respond to those.

Copies of the summary are available on the table as you came in today and are available by mail or otherwise at the District offices. So, I'd like to begin this evening-- perhaps first I should introduce some of the District staff people who are here in the audience that I recognize. Bob Helweck from the General Counsel's office, Mr. Myers, Jon Myers, who's in charge of our planning -- Water Resources Planning -- newly appointed to that position. Carl Stinson, who is overall director of Treatment and Distribution and John Davis of the firm that prepared the environmental report, sitting in the back row. Gayle Montgomery up here in the front row in our Public Information Office. Now I think I'd like to begin with asking Richard Kolm to make his presentation.

KOLM: We need to close those doors. What I'll do is quickly walk through a lot of information that, if you've read the summary, will be familiar to you but perhaps it'll help focus on some of the questions and some of the information that you may be seeking.

First of all, the District's water supply is from the Sierra Nevadas as shown in the upper left of this diagram. The water supply out of the Mokelumne River is diverted at Pardee Reservoir for delivery by the Mokelumne Aqueducts into the East Bay area. The District also operates Camanche Reservoir shown in the lower left of this schematic for flood control and for meetings its obligation on the lower Mokelumne River. This is a map which shows the watershed on the far right, and the District service area on the left. The Mokelumne Aqueducts -- the three aqueduct pipelines -- extend from Pardee Reservoir down through Stockton and they cross the southern part of the Delta and then through Concord and into the East Bay area. The District serves an area from a small part of Hayward on the south to Crockett on the north and easterly out into part of Walnut Creek and the San Ramon Valley. At the top of the map, you can see the Folsom South Canal. The District has a contract-- has had a contract since 1970 with the Bureau of Reclamation for a 134 million gallons a day off the American River by the Folsom South Canal, and that contract has been in litigation for the last 16 years.

The District's water supply, as I say, enters the District in the vicinity of Walnut Creek. There are six active

water treatment plants, the three in yellow take delivery directly off the Mokelumne supply and delivered to most of the customers in the District. The three other water treatment plants, from Sobrante on the north, to Upper San Leandro in the south, serve the rest of the system. The District's supply is 325 million gallons a day in most years. The current level of demand is about 220 million gallons a day. You can see in the blue, in the District's service area, the five terminal reservoirs, the East Bay Reservoirs that are at the terminus of the Mokelumne system, from San Pablo Reservoir at the top and Briones Reservoir, the small Lafayette Reservoir, and then Upper San Leandro and Lake Chabot at the bottom.

The District's number of customer accounts has been growing over the years, although at a relatively rate of less than one percent a year, but you can see that the demand which is shown in blue has taken some different directions. There was a steady increase in demand during the 1960s, and then levelled off in the 1970s with a dip during rationing in 1977, during that water supply shortage; and it's only now that the demand has returned to about 220 million gallons a day, about the same as it was in the mid-1970s. This indicates that there's been considerable increase in water use efficiency by the customers of the District.

The District's planning area is the yellow line shown on this map which is its ultimate boundary, and the District is bounded by a number of other water agencies in Martinez, the Contra Costa Water District, Dublin/San Ramon and the Hayward

water system. The only area of potential significant growth is in the Dougherty Valley, Tassajara Valley area which is shown in orange, but which is outside the District's present water supply planning area.

The projected demand from the present level of about 220 million gallons a day is in the range of 270 to 280 million gallons a day in the year 2020. This is based on projections of housing, employment, land use, prepared by ABAG and verified in discussions with the 20 cities we serve, and is also based on State Department of Finance projections going on out to the year 2020. The range of demand depends on the rate of growth that might take place in the District as well as the effectiveness of water conservation and water reclamation program.

A large part of the District's projected increase in demand is residential water use. The three bars in the middle indicate the distribution of housing units in the District. The large bar is Western Alameda County where you can see most of our housing units exist, and then Western Contra Costa County and Central Costa County. Also shown in the cross-hatch areas is the potential growth, and you can see it is distributed throughout the District. The three bars on the right as related to water use, related to the number of households, the water use in Central Costa County is generally higher than in the rest of the District. There are three water supply issues that the District has been focusing on in developing the proposed water supply management program. Those are security, shortage, and safety and health.

First I'd like to say a few words about the security issue. The problem is pipe breaks, particularly the potential threat to the aqueduct system where it crosses the Delta. The answer that the District staff has found as a result of its extensive studies is a solution we call water banking or the construction of additional terminal storage. The three aqueduct pipelines, as I said earlier, cross the Delta. There are three river crossings where the pipelines go under the rivers. For a distance of nine miles across the Delta, the aqueducts are elevated above ground on piers. The problem that we're faced with in the Delta is the foundation conditions. As you can see, both the levies and the aqueducts are founded on soils which are loose, sandy silts which can liquefy under earthquake conditions and peats which have no lateral structural strength. In a major earthquake the lateral forces would tend to try to move the aqueducts and the foundation system, the pile system in the sandy, silty soils and the peat just would not be able to withstand those lateral forces, and we would expect the aqueducts to collapse and be damaged. At the same time, the levies which are poorly constructed and sitting on poor foundations would tend to fail, and we would expect, under the very worst conditions, all of the islands to be flooded after a major earthquake. This was dramatized in 1980 when Jones Tract flooded, which is the lower part of the picture. The water was restrained by the railroad embankment which is the lower part of the picture. The embankment failed when a train was crossing it, and the on-rush of water through the break began to erode the support system

under the aqueducts. When the water was finally pumped out of Jones Tract, there were, in some areas, the erosion as deep as 50 feet below the original ground surface.

For such outages, the District depends on its water in its terminal reservoirs. I mentioned earlier the 5 reservoirs in the East Bay Hills; this is San Pablo, and the District counts on this storage to get it through such outages.

Just taking a look at the security risks due to flooding and earthquake, if there's maybe one island flooded because of simply a levee overtopping or levee failing, we can look to an outage time of about four months. But, it's the earthquakes that cause the greatest problem, or have the potential for the greatest problem. And, the outage time depending on the location of the earthquake in any one of 12 faults and the magnitude of the earthquake could cause an outage that could range up to 10, 13, or 17 months, according to studies by District consultants. In the lower part of the chart, you can see that our existing storage gives us capability of surviving for about 4 or 5 months, and one of the solutions to the security problem is to provide enough storage to carry us through at least the most likely case, which we're looking at a 13 month outage. I'll talk more about storage a little bit later.

The second issue is shortage, shortage in time of drought, such as what we're involved in right now, when there are two or more dry years. And the District depends on the precipitation in the Sierra Nevada, the snow melt that occurs in the spring, and runs off down the Mokelumne River to Pardee Reservoir,

where it's diverted to the East Bay area. If that runoff is not sufficient to provide the water that's needed to meet the demand, then we are faced with a shortage. And again, the District has to depend on its storage to get through a period of shortage, such as Briones Reservoir, San Pablo, but also the Sierra reservoirs which are still connected to the system. This is demonstrated or illustrated by this chart which the orange curve at the top shows the typical, normal storage in all of our reservoirs on the Mokelumne River and the 5 terminal reservoirs, which varies between 600 and 700 thousand feet during the year, but when we're in a dry period such as we were in '76 and '77, and such as we're in now, we begin to use that storage and you can see how the storage declines over time.

Another issue with respect to shortage is the level of rationing that would be required to work in conjunction with storage to get us through a shortage period. In 1977 the actual reduction in demand by all customers was 39 percent. Because of the increased efficiency of water use of the last several years, we believe that today the achievable level with the same hardship on District customers is about 35 percent and that would continue to decline as water use efficiency increases. If we were to try to reduce the hardship and, recall that in 1977 there was about \$75 or \$80 million worth of landscaping lost, if we were to try to reduce that hardship, one approach should be to reduce the level of rationing to about 25 percent for all customers. But this then requires more capacity in your storage system.

When we talk about the limit on rationing, we're looking at the availability of the District supply. The chart on the left considers the current policy which is a limit of 39 percent on rationing, and given that level of rationing, our supply is adequate till about the year 2000, or between 2000 and 2005. When we go above the blue area, following the demand increase along the yellow line, then the rationing has to become greater than 39 percent to survive with our present existing storage. If we were to change the policy to reduce the hardship and go to a 25 percent level of rationing, then the demand would exceed the availability of the supply in the next couple of years. This is based on the existing storage that's available.

So when we look at shortages, the solution that District staff has been focusing on is additional terminal storage, you can see on the left that the existing storage is about 138 thousand acre feet, the usable storage. When we look at the year 2020 and the demand level of 270 million gallons a day, just to stay within the present 39 percent rationing limit, we'd have to add 55 thousand acre feet of storage. To improve the situation or to reduce the hardship and go to a 25 percent limit, we'd have to add 95 thousand acre feet to our present storage.

The third issue is safety and health and the threat of pollution contamination in the water supply, the District is trying to maintain a high quality water. The answer that the District staff has found is watershed enhancement to protect the water supply as well as treatment improvement. The treatment improvement program is getting underway in the District which

would upgrade and modernize our 6 water treatment plants. But the District also owns 25 thousand acre feet of watershed land around the 5 terminal reservoirs, and adjacent to that, the East Bay Regional Park District and others own about 20 thousand acres of watershed land. The concern is that there is some of that watershed land which is still in private ownership and has the potential for development which has the threat of contamination and pollution to the water supply. There are about 48 hundred acres that have the potential for acquisition.

Looking at a composite view of all of the alternatives as they relate to security of supplies as well as shortage, as well as the safety and health issues, first of all in the Delta, there's a need to continue the program of upgrading and maintaining the levies on the islands that the various aqueducts cross. But the District can also begin to take a look at the possibility of reinforcing the levies, and particularly the crossings where the aqueducts go under the rivers, but also take a look at the possibility of improving some of the supports under the aqueduct pipelines to reduce the risks. However, these-- this approach could not solve the security problem. It cannot provide the water supply that's needed to get through an outage in the Delta.

Another alternative is to construct a new pipeline system across the Delta which would be constructed to withstand the earthquake forces and also the flooding. To provide the same capacity that we have over the distance of 9 miles of elevated aqueducts today, we'd have to spend about \$265 million. And

that would be a single purpose project that would only provide security to the supply.

Another alternative that the District has looked at in the Water Supply Management studies is water conservation and certainly part of the program is to continue to implement the current District program as well as provide additional conservation measures. But the kinds of measures that would be needed to provide either security or to protect against shortage of the supply would be very severe measures which cannot be recommended. Water conservation includes educational elements as well as stressing low water use landscaping and reducing water use for landscaping, as well as other measures.

Another alternative looked at by the District is waste water reclamation. There are some projects in operation now, one that is actively being pursued as an additional project, is the Chevron Oil Refinery cooling water, which has the potential for saving about 5 million gallons per day eventually. The problem with reclamation like conservation, is that while it's an important part of the Water Supply Management Program, it cannot provide a solution to the end of the shortage or the security problems.

Another alternative is to pump out of the Delta. This is often discussed as a solution to the problems of either security or shortage and particularly, when we talk about security, we see a serious problem and that if there's a major earthquake which causes an outage of the aqueducts, it would also cause flooding of the islands and draw the salt water from

the Bay and the sea up into the Delta; the water would essentially be unusable, and also, there would be no Mokelumne supply available to blend with it.

Another alternative that we've taken a look at in our considering is inter-ties with other agencies. The Martinez Water Department buys its water from Contra Costa Water District, and Contra Costa takes its water out of the Delta, as does Dublin/San Ramon through the Zone 7 system in Alameda County and the State Water Project. The only supply of equal quality to the Mokelumne supply is the Hetch Hetchy system, which supplies the City of Hayward. We do have existing connections where we can bring in 5 to 10 million gallons a day from Hayward in an emergency; however, that's not adequate for a shortage or for security; however, we can take a look at a direct inter-tie between the Hetch Hetchy and Mokelumne systems. The cost would be on the order of about \$100 million, and one of the problems with that is that there's no assurance that Hetch Hetchy water would be available when the District needs it.

The solution that we've been focusing on is the solution to both the supply and the shortage problem is to provide water banking, which means construction of additional East Bay storage and after looking at about more than 25 reservoir sites, we have focused on 3 of the best sites, which are Pinole reservoir site, just east of the town of Pinole in the vicinity of El Sobrante; Buckhorn Reservoir site which is on the Upper San Leandro reservoir watershed; and the Los Vaqueros reservoir site which is a project of the Contra Costa Water District. Pinole can provide

about 44 thousand acre feet of capacity which is less than what we are estimating is needed to get through a thirteen month outage in the Delta, which is about 145 thousand acre feet. The Buckhorn reservoir site, we can construct a 145 thousand acre feet of storage. It's also a site that's in a relatively high elevation and water can be fed to any part of the District's system, any of its water treatment plants, by gravity. The Los Vaqueros site can also provide 145 thousand acre feet and would require a joint project with Contra Costa Water District. The-- Our District has also indicated that if we were to participate in such a project, the water that we would put in storage would have to be Sierra water. The Buckhorn project has a cost of about \$152 million, which is lower than a share of Los Vaqueros which would have a cost to the District of about \$186 million.

The Pinole site is all owned by East Bay MUD. Some of the watershed land, up to the ridge lines around the reservoir site, the District does not yet own. This site has been the site of a reservoir since 1912 -- just waiting for a reservoir to be constructed. The Los Vaqueros site is being acquired by the Contra Costa Water District, and they intend to pursue that project.

The Buckhorn reservoir site would be on the Upper San Leandro Reservoir watershed and the dam would be constructed in an arm of Upper San Leandro Reservoir. The current use of the land, both in Upper San Leandro and Pinole, is essentially cattle

grazing, as well as recreational hiking. I talked about the potential for acquiring additional watershed lands to enhance the watershed and provide further protection against pollution and the areas that are shown here as possible land acquisitions -- this is the northern part of the system, the area in orange is the potential Pinole resevoir site; the reservoir below it is San Pablo, and to the right of that is Briones Reservoir.

The enhancement of the watershed lands could also include expanded trails and recreation. The existing trails are shown in yellow, here around San Pablo and Briones Reservoirs, and the proposed trail system could be expanded -- that's the white lines -- could be expanded to extend further north and into the Pinole reservoir watershed area.

In the southern part of the system, the blue, the large blue area's Upper San Leandro Reservoir. The orange is the potential Buckhorn Reservoir site. There is a small part of the watershed, additional watershed, that would have to be acquired for the reservoir itself, although the area that's shown there as possible land acquisition goes beyond that to take the watershed up to the ridgeline, and also to the-- just above Upper San Leandro is Indian Valley, which is proposed as an additional watershed enhancement. There is a total of about 4800 acres that could be acquired to further enhance the District's watershed lands in the East Bay area. As in the northern part of the watershed area, in the south the existing trails are shown in yellow, and there could be an expanded trail and recreation in

that area, particularly in and around Upper San Leandro Reservoir which is shown in white.

Taking a quick look at the average cost to ratepayers of the Water Supply Management Program that falls out of this study that's been going on, first of all, water banking, if we're looking at Buckhorn reservoir, that's a cost of \$152 million. When we look at the rate impact over the life of the long debt service, we're looking at an increase of about 1.6 percent on a typical water bill. Watershed enhancement, if we're looking at an acquisition of about \$20 million, that's about two-tenths of one percent increase in a typical water bill over that period. Water treatment improvements of about \$35 million -- Delta improvements at about \$10 million. Shown in conjunction with that are ongoing capital programs, the distribution system improvements of about \$130 million, and building modernization program in the District of about \$70 million; and the point here is that for a total program of about \$417 million, the rate impact for a typical water bill over that bond debt life period would be less than five percent.

Just very briefly, the environmental effects of constructing a terminal reservoir, the principal effect is, for the long term, is creating a lake where a lake doesn't exist today. There are short-term impacts, which include the construction of the necessary transmission pipelines, in pumping plants which would be adjacent to the project. In the case of Buckhorn reservoir, the pipeline construction and pumping plant construction would be in the City of Moraga. The construction traffic

would mostly come in through Castro Valley and there'd be some through the town of Moraga itself.

GILBERT: That concludes Rich Kolm's presentation, but I would like to ask you again, if we'll take a brief recess, for five or ten minutes, it's a relatively small group, and if you would, fill out cards indicating the information that we've asked for, and we will then schedule your appearances. I would hope that although this is a small group and we probably have plenty of time this evening that you could try not to be redundant to the presentations of previous speakers, and hopefully, we will be able to respond to any questions that we have the information on right now. So let's take a brief recess and we'll reconvene here in about five minutes.

[BREAK TIME]

GILBERT: We have received four requests to speak, and we'll proceed down those in the order that we received them. I would like to mention again that the Board of Directors is holding a hearing a week from tonight, and would urge you to attend that hearing too. I suspect that it will receive a greater level of attendance and have a longer presentation period. So, for those of you who are interested in the subject, I would urge you to attend that hearing as well. Let me start by asking the first person, Don D. Dears, Chairman of the Water Resource Planning

Committee; otherwise called "W.A.T.E.R" related to the current situation. I think the full title is Water Allocation Through Equitable Rationing. Mr. Dears--

DEARS: Thank you very much. Since you've already given my name, I don't need to go through that again.

Well, we're a group of citizens who have a strong interest in the District's Water Supply Management Program and would like to express our comments on the proposed plans. Many of our group experienced the drought of '76-'77 and are astonished to find the District in a similar crisis this year. The group, citizens from our area, responded with a great community spirit during the last drought to share the low water supply and suffered great financial loss, estimated between seventy-five and a hundred million dollars in that period. Now, we've studied very carefully the recently prepared WSMP summary report, and have attempted to become knowledgeable about the problems confronting the District. It would appear to us as though the risk to public health and safety has been understated in your summary report. You mentioned it again this evening, but I'd like to just emphasize the point that there are twelve different faults in addition to the Antioch fault where ground shaking could damage the aqueducts and sever the supply of water for a period of ten months or longer, as you said. An event of this type has the likelihood of occurring once in every twenty-three years, which is a far greater risk than the once in a hundred years as was cited in the preliminary conclusions in your report. So, and-- this is a far greater risk than you, I think, have indicated in your report?

7 Now, furthermore, the length of the outage, we think,

has also been understated because we understand that earlier studies indicated that the length of the outage would be longer, and therefore, the problem could be even more severe than you've indicated. Now, sound risk management dictates that both the probability of an event happening, and the consequence of the event, be taken into consideration. A simple payoff table cannot suffice when the consequences of an event are catastrophic and imperil the health and safety of the people. An event having low probability is equally important to one having high probability. If the results of the event are so great as to endanger the community, failure of the aqueduct is such an event and imperils all the people in the East Bay MUD service territory no matter where they live. And, as you pointed out, Delta water cannot be counted on as an emergency supply during an aqueduct failure since salt water incursion can make the water unusable. It is estimated that the Delta water could have a salt content of 2600 micrograms per liter, or roughly twice the relaxed emergency standards specified by Title XXII of the California Administration Code of a thousand micrograms per liter, or for short-term 1500 micrograms per liter.

11 And, just for information, the standard during normal conditions is 500 micrograms per liter. Now, as your report indicates, indoor usage alone accounted for 56 percent of total usage in 1986. On this basis, extrapolating out to 2020, existing storage capacity would be exhausted by indoor demand alone in less than ten months. In less time than it would take

to repair the aqueduct. And this is without considering outdoor needs at all. There is, therefore, serious and legitimate concern whether there will be water for fire fighting, sanitation or other human needs if the aqueducts were severed. Now, clearly, with a \$75 million loss last time, clearly, the economic disaster to all communities would also be of unparalleled proportions. So we urge the Board of Directors to approve the construction of new terminal storage facilities of sufficient capacity to provide an adequate supply of water. Furthermore, we urge the Board to investigate means for bridging the supply gap between now and the time terminal storage facilities are operational, which is estimated to be 1995. Currently there is a seven year water supply gap during which the communities are exposed to the risk of catastrophic failure of the aqueducts.

Along these same lines, we urge the Board to continue with the upgrading of current aqueduct supports and levies to help improve the security of the water supply from the Pardee Reservoir. Now, we support conservation and encourage the Board of Directors to undertake existing and new conservation programs. It should not, however, be the policy to plan for water needs based on 25 or 39 percent rationing when supply does not meet demand. Such a policy makes the system weak and is likely to create the type of water shortage than can imperil public health and safety. Water rationing is a self-fulfilling prophesy. In addition, rationing when necessary should be fair and take into consideration the impact of rationing on all aspects of economic

7 loss, including landscaping which is itself an environmental factor, and also take into consideration the impact on environment, health and safety. So, in summary, we believe there is an urgent need to build new terminal storage facilities in order to protect the health and safety of the community. There is an urgent need to address the emergency needs during the seven year water supply gap between now and the time that the terminal can be completed, terminal storage can be completed, upgrading of existing aqueduct supports and levees should be accelerated, and the policy of rationing should not be the basis for planning water needs, since it can lead to shortages that threaten public health and safety for all residents in your service territory.

GILBERT: Thank you very much.

DEARS: Thank you.

GILBERT: The second card I have is from Roy Tuttle, also from W.A.T.E.R.

TUTTLE: I believe he has spoken adequately to my concerns--

GILBERT: Okay. Thank you. The third, Frank Delfino, Citizen-Taxpayer, Castro Valley.

DELFINO: It's nice to have taxpayer--

GILBERT: When you write it down (laughter)--

DELFINO: My name is Frank Delfino from Castro Valley. I 33 have three questions to ask. The first one is, what is watershed enhancement, which you used a number of times in your discussion. Number two, if the Delta is so critical, why are we spending 7 only \$10 million to reinforce the levies and overhaul the systems there? He talks about a period of time, seven years, and

so on. This is a critical item, and sure, you don't want to throw money away, but if it's really that critical, it looks like it's worthwhile putting sufficient money to do the job correctly. And the third question is, when you say in your summary report "obligation to serve an area," does this mean that you are legally required to do so? Or is this just some kind of a gentlemen's agreement, or something like that. That's all I have.

2

GILBERT: We will note those questions for the record, but given the, the-- few individuals who want to make comments, perhaps we could take a moment and, Rich, if you could respond to the first question regarding watershed enhancement, and maybe elaborate a bit on what that means.

KOLM: Yes, uh-- what I was trying to show in the slide presentation as watershed enhancement, I-- you may recall I talked about the fact that there are about 4800 acres that are adjacent to the present 25 thousand acres that are owned by the District. These 4800 acres are within the watershed up to the ridgelines around the five terminal reservoirs. These properties have a potential for future development, and if they were to be brought into public ownership, that future development could be prohibited, but the enhancement is not only just buying the watershed land and adding it to the District's land holdings, but also to enhance the recreational opportunities, the trail system on those watersheds as you may have seen in a couple of the slides.

GILBERT: As I-- there were two other questions you asked, let me comment briefly on each. The Delta security issue is a

complicated one. The State of California, the Corps of Engineers, have studied ways of protecting Delta levees from failure and the investments are far more than the \$10 million shown in our proposal. There was a recent bill in the Legislature that provided matching funds for local farming units to contribute some money with the State, primarily from Tidelands Oil contributing a great deal more, to rebuild the Delta levees. The problem is that with the levees continually sinking and the wind erosion that takes place during the agricultural process there, that it's almost literally a bottomless pit for money. And, I don't think you used the word "correct the problem." I think that it would take a huge investment, way beyond East Bay MUD's capability, to correct the problem, even if that were-- I think there's probably some question as to whether that's possible. But the \$10 million we talked about, or the staff has proposed, was to try to pick out those critical areas where our pipelines were most vulnerable, where the pipelines cross the rivers, or where there were particularly bad foundation problems, and in fact, that \$10 million is really just an estimate because in the long run, we probably will have to spend a great deal more than that in the Delta; but this was an immediate or short-term program. It's very difficult, though, for the District as one entity to achieve a high level of security just by our investments alone.

The second point about our obligation to serve has been the subject of a lot of controversy, and I'll try to pick my words carefully here. Uh-- there is an opinion from our general

counsel that the properties within the green area on the slide, which are currently within the District, which desire water service are-- we are obligated to extend service to those areas under reasonable terms and conditions. The only time when utilities have declined such service is in the time of a crisis, an extreme drought. That kind of service did get curtailed in several utilities in 1977. Then there's the area that is between our present boundaries and our ultimate service boundary. While the opinion is not so strong, our general counsel's opinion is that the District could be legally made obligated to serve in that area. Outside the ultimate service area becomes much more questionable; and that orange area, for instance, there is some school of thought that even under that circumstance, if we were the only service area . . .

[END OF SIDE ONE, TAPE ONE]

[BEGINNING OF SIDE TWO, TAPE ONE]

GILBERT: . . . if we had on a long-term basis a reasonable supply then we could be obligated. There is another school of legal thought that you're not obligated at all beyond the ultimate service area, and you may have even a questionable obligation to areas within that service area you haven't annexed. So, it's not 100 percent sure, but I think in general the feeling is that within our boundaries we are obligated to serve under reasonable conditions. That doesn't mean you give the water away.

The next person is Peter Vorster, who indicated previously that-- Peter, you had a number of questions, so--

VORSTER: Yeah, in fact, I-- I don't have any statements to make, other than--

GILBERT: That's fine, whatever you care to say, for the record.

VORSTER: Yeah, I'm-- I'm a private consultant in hydrology but no one has paid me, so I'm just here on my own. I was a former member of the Citizens Advisory Committee that, I guess, gave advice on the water action plan that was a prior planning process. In fact, I guess the first question I would have is the relationship of the Water Action Plan to the current program that you're proposing, and then the other questions I have relate to questions on security, alternatives and drought supply, so do you want to-- should I--

GILBERT: Why don't you ask them one at a time, and we'll let Rich see what he can do with them and--

VORSTER: Okay, uh-- the likelihood of some kind of pipeline failure seems like it will get greater and greater in the future as sea level rises and, you know, we have more variability in our weather, in terms of flooding and whatnot, so, given that, uh--

⑦ is it the District's plan to eventually replace the pipelines? That's, I guess- the-- does that--

KOLM: Well, in the proposed program, we have-- as Jerry talked about, some of the improvements in the Delta itself to reduce some of the risks, but in terms of replacing the pipeline, the proposal would be to build storage at this time, and not replace the pipeline until some future date when there was an actual need to do it because of a serious event.

VORSTER: So-- okay, so at this time replacing the pipeline is not part of your--

KOLM: It's not part of the program.

VORSTER: Okay.

GILBERT: You could argue, I would just add, that it should be considered as an alternative.

VORSTER: Yeah-- I would, you know, I would think that it eventually-- is it correct to assume that eventually it will be replaced?

GILBERT: Well, uh-- I would say yes, but eventually is hard to define. The one issue that could affect that is the timing of receiving our water from the American River. That if that is delayed at the time the American River connection is made to the Mokelumne aqueducts, you then have a clear indication that there will be more water that needs to flow from east to west. At that point you may have both a capacity limitation and a security problem. But until that occurs, it probably makes sense to delay that. I would say it is an alternative that should be considered as part of the Water Supply Management Program.

VORSTER: In following up on what I think is a likely scenario, I mean, it's hard to put probabilities on it, but there is going to be levee failures and there's going to be problems in the Delta in the future. I mean, I think it's a no-win situation. I think it's a losing situation. The land is sinking, the sea level is rising, and it's just-- it's a losing battle. Given that, has there-- is there a coordinated response that's been developed, you know, between the State, Metropolitan Water

7 District, all the major users of the Delta, I-- I would hope there's some kind of plan to respond to what could be a disaster statewide. Or, is there-- I mean, I guess what I'm saying is, uh-- you're assuming the worst possible, that if there's a Delta levee failure and you're talking about salinity intrusions and whatnot, it would seem to me that immediately, there would be, just, I hope, there would be some kind of coordinated response to do something to prevent the salinity intrusion, so on and so forth.

GILBERT: I think it depends on the nature of the failure. If it's an isolated or local failure, I think you could probably take steps to reduce the exposure to salinity intrusion; however, if its a major failure I don't think you-- I don't think there's enough control on the system in terms of reservoir releases, pumping controls and so forth, to affect that. The only coordination we have now, and it is pretty effective so far, is under the State law, the Department of Water Resources is the emergency manager of the water resources of the State, and so, like they manage the flood control function in the winter time, they clearly would become the coordinator to balance the available supply among users, including the Metropolitan Water District and any other users if East Bay needed an emergency supply and so forth. So, I would like to the State of California and particularly the Department of Water Resources to undertake that function.

KOLM: And certainly they would have to rely on the storage that they have south of the Delta.

VORSTER: Right. Do they-- have there been studies done by either the Corps of Engineers or the State to look at what would happen if there was-- well, I guess the worse possible scenario is an earthquake that knocks down a lot of levees. What kind of salinity intrusion would be-- what kind of disaster are we looking at, statewide or regionally, in terms of-- you know, of-- saline water coming into the pumps and making it impossible for East Bay MUD to use Delta water?

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GILBERT: The Department has several studies that are going at the present time, including one related to the Bedford Island proposal which is to use this vulnerable area that we're discussing for storage of fresh water, to avoid impacts of water transfer on the Delta -- you put fresh water into an island and pump it out in the summer time and use it for water supply. I'm not sure that will solve our problem, given the scenario you describe, but I think again the Department of Water Resources has several studies that relate to that. For instance, with recent data on trihalomethanes in the water supply in the Delta, the Department is not engaged in studying how to minimize that, and part of that is looking at which islands that they can count on to provide security in the event of island failure. So I'm sure work is going on, but I can't tell you that there's a specific program related to it.

VORSTER: What I guess I'm getting to is whether-- how did East Bay MUD conclude that the Delta would become-- Delta water would become too saline to use if there was a--

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KOLM: Well, this has been evidence of, for example, in a-- to a lesser extent, when the Andrua Island levee failed and that flooded and our District, on an emergency basis, provided the supply to Contra Costa Water District, it's been very evidence that such inrush of water into the Delta, does draw the salt water in from the Bay; and if you look at a failure that has most of the islands having levees fail and the islands suddenly flooding, the onrush from the Bay's going to be tremendous.

VORSTER: In the winter time situation, if it was caused by flooding, probably be quite a bit of Delta outflow-- fresh water outflow--

KOLM: There's a range of conditions--

VORSTER: So-- some conditions it would be very salient, other conditions potentially, you'd have an island full of fresh water that you could pump out. Considerably-- it could be beneficial perhaps. The other question relating to security is, I guess I came in late, I don't know if you were showing a slide, how the outtages links were calculated. I guess, depending on what kind of failure you have, you have different outtages? You know, some as little as 5 months--

KOLM: The outage times were estimated based on the time it would take to repair and restore the Aqueduct system. And the assumption is that the islands would be flooded, the repair and restoration work would have to be working from barges, and the most difficult work would be to repair the underwater crossings, particularly where they go through the levees and where there could be serious damage.

VORSTER: I guess there's some scenarios where it would only be like or five or six months' outage, like-- if-- I think-- or at least I was sta--

KOLM: You're talking about a very low level of ground shaking--

VORSTER: --or-- flooded. Flood situation.

KOLM: These are scenarios in-- you can go into the summary and there's a table in there that describes what our consultants have estimated the damage to be under various levels of ground shaking due to earthquake, and so the outage times were based on those failures. In other words, it talks about whether just Number One Aqueduct fails, or whether One and Two fail, etc., and there were scenarios developed and from that, then the construction specialist took a look at what it would take to go in there and repair those Aqueduct systems.

VORSTER: And the last question I have on security is that your connection with Hayward-- is that a connection that you could use to pump water into your terminal reservoirs, or is that just one that you could use to service just the southern part of the District?

KOLM: It's really into the distribution system. We--

VORSTER: Do--

KOLM: We brought water through those connections in 1977 when water was being transferred through our District to Marin County, so we have used them, we know that they do work.

VORSTER: And you could use-- you could bring water in there and distribute it systemwide?

KOLM: To the lower part of the system.

VORSTER: Oh, just to the lower part-- you don't have pumps--
I mean, can you pump it up into the reservoirs--

KOLM: No--

VORSTER: --and.

KOLM: Well, you could develop a system, but the present system is just flow into the system.

GILBERT: And it's limited to somewhere between 5 and 10 million gallons a day, which represents somewhere between 2.5 and 5 percent of the total system demand.

VORSTER: Right. On the alternatives, uh-- did you look at reservoirs within the region but outside the District, uh--
expanding existing reservoirs, like Del Valle, or you know, some of those reservoirs, or--

KOLM: The technical report talks about all of the 26 sites that--

VORSTER: I didn't see-- that's why I'm--

KOLM: --it--

VORSTER: --it didn't look at Del Valle or existing-- what I didn't see there were existing reservoirs--

KOLM: There was a set of criteria that were established in terms of minimum amount of storage and certain other criteria in relation to the District system, and then there was an evaluation of a large number of sites and those were continually screened and brought down to a lower level. I'd have to go back and look at the data to see if Del Valle, for example, was included as--

VORSTER: And--

KOLM: --consideration. I assume it must have been at some (Inaudible)

VORSTER: Uh huh. How much terminal storage does East Bay MUD have in comparison to other large water districts? Just-- is-- do you have any feel for that?

GILBERT: Less than some and more than others. That's a good question, and I think we should probably respond to that with some data in the future documentation.

VORSTER: And-- I'm not an economist, so I'm going to ask maybe a very-- it's a simple question of, would Los Vaqueros-- you show it costs more, \$30 million more or so, uh-- yet, you would think that by working with Contra Costa you would be achieving some cost savings; you know, I don't know the details of it--

KOLM: Well, there is an economy of scale. Certainly, the cost per million gallons of storage or per acre foot of storage is going to be less for a larger reservoir, but you'd have to go in and look at the specifics of the site--

VORSTER: Right--

KOLM: --the specific requirements to construct a dam at Los Vaqueros compared with Buckhorn. Uh-- the length of the pipeline connection that's needed between the reservoir and the water supply systems, there's a number of factors that go into the equation that determine the cost.

VORSTER: Well, the length of pipe obviously is going to be quite a bit more from Los Vaqueros.

KOLM: . . . hearing on it, too.

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VORSTER: Uh-- in the report you talked about I think, the Woodbridge exchange agreement, and the problems with that. You also mentioned-- it implied or I think it stated that the Mokelumne River hasn't-- lower Mokelumne hasn't been adjudicated, what-- the question is, why hasn't it been adjudicated? Wouldn't an adjudication actually work to everyone's benefit where you could do conjunctive use with the overdrafters and-- basically, work out a system where perhaps you get dry year entitlements by providing wet year water to-- I-- I think there's some-- why do you want to avoid the adjudication of the lower Mokelumne?

GILBERT: It's a complicated issue. It involves things that we currently have underway right now with regard to this year's drought management effort. But the answer is the District not only hasn't avoided it, but in fact is obligated to release water downstream under what's called the Lodi decrees.

VORSTER: Uh huh.

GILBERT: The river has been adjudicated in the sense that the principal user's rights are defined. They may not be defined in a way that if you adjudicated in 1988 would meet the current test, in light of recent water rights decisions, but we are obligated legally to meet the conditions of the Lodi decrees, which spell out, among other things, the downstream releases that are required from-- initially from Pardee, and of course from Camanche, after Camanche Reservoir was built. There are dry year limitations so that in a year like this one, the obligation is

reduced. Some would argue that it should be reduced still further, but to avoid that lengthy litigation this year, the Board authorized a Delta pumpback option which would divert water from the emergency pumping facility we began to construct where we built most of it in 1980, easterly to Camanche Reservoir so that we could use Delta water to satisfy those uses you talked about rather than releasing water from Pardee Reservoir. But we're currently planning both the engineering and the permitting side of that. It's pretty complicated.

VORSTER: Are you looking-- are you also negotiating with farmers for dry year releases and, you know, getting their water--

GILBERT: We don't need to do-- in effect, we're doing it indirectly.

VORSTER: Uh huh.

GILBERT: Because the Delta pumpback option says, we're going to supply you with water from a different source.

VORSTER: Okay.

GILBERT: So the minute you do that you are-- the term water water marketing is frequently used--

VORSTER: Right--

GILBERT: We are doing a form of water marketing without having to force an unwilling buyer into a negotiation which they have little incentive to participate in. So,-- or at least there could be some serious legal questions.

VORSTER: Right. How-- how will these downstream users-- why and how will they increase their draw upon the Mokelumne in the

future? You talked about that in the report, and that that would be a constraint on the amount that you'll be getting from the Mokelumne in the future.

KOLM: I think what we talked about in the report is the increased use upstream at Pardee Reservoir, not downstream.

VORSTER: Oh, it's an upstream--

KOLM: Yeah, this is the increased use in the Amador and Calaveras Counties--

VORSTER: So that will restrict you for access to your 325 MGD.

KOLM: If they continue to divert water that they have a senior right to do, there's less available-- it makes it more difficult to the District to uh-- develop the water in a dry year that it has entitlement to.

VORSTER: Okay, so there's no downstream-- okay. Uh-- I guess then, the last question on the alternatives is then, in the water action plan you had this alternative called the Mokelumne Aqueduct Security Plan. Is that-- that is the alter-- has become one of the alternatives in the current scenario which is--

KOLM: Well, what was called the Mokelumne Aqueduct Security Plan back a number of years ago is the alternative that I described which is to build a new aqueduct pipeline across the Delta, parallel to the present aqueducts. That pipeline could be built to be secure against the major earthquake that might be expected or the flooding that might occur due to a levee failure. At the time we were talking about that plan, we were only looking at what to do in the Delta, whereas now we've stepped back and

looked at the broader picture of the District's water supply needs which are not only security in the Delta, but also water shortage, and said, what is the best solution given all the problems that we're faced with.

VORSTER: The reason-- I bring that up only because that was something that the Citizens Advisory Committee was looking at. We did not-- at the time, I guess, terminal storage really-- was suggested but nothing had been proposed, so the terminal storage is a fairly recent--

KOLM: It's an evolution--

VORSTER: --evolution.

KOLM: Discussions that have been going on.

VORSTER: Uh huh. On drought supply, what period do you use for making your shortage calculations when you decide what uh-- how much demand there is for different reductions? As you using-- what historic--

KOLM: Well, we take a look at all of the historic record going back about 76 years--

VORSTER: --including the last couple of years?

KOLM: --and the ability at a given level of demand to get through the historic drought period, such as 1928 to '34, and '76-'77, and even individual very dry years, which we're able to get through without any problem.

VORSTER: Are you using the most recent-- the question is are you using the most recent data also, '87 and '88? Or '87, I guess you can't use '88.

KOLM: Well, not yet. Because it's '87 and '88 together with whatever might happen in 1989 that determines how you get through this particular drought period. We don't have all that data yet.

10 VORSTER: Uh, you talked about landscape irrigation management and talk about the potential that it has, and from my understanding, it looks like there's a lot of potential there, but then you talk about-- you kind of stopped short, you just talked about a potential 20 percent of the parks would be put on some kind of landscape irrigation management where you'd use real time climatic data, uh-- is there a reason why you don't want to push that even further, you know, and get someday, you know, everybody on, all the large water users on some kind of real time climatic management system.

GILBERT: Rich wants me to answer that. (Laughter) The only reason is a practical one. Its-- I think the District just in principle is committed to trying to shift over time the amount of water that's used for landscape irrigation across the board to a lower level. And there are different ways to do that, and the obvious targets are the large irrigators, initially, because you can get a large amount of water; although collectively the biggest amount of that is in the individual home area, if you add it up. The reason we start small is because we want to prove it. To do that, I'm not aware of any utility that has really embarked upon a major program of change-out, if you will, or an altered approach to irrigation management. We're beginning that in the drought right now, by a number of requirements that the Board has

adopted. But-- so I think the reason for that alternative being limited to 20 percent is not because we think that that is only as far as you go, but that's-- if you're trying to predict benefits from a system, you don't know if it's going to work. You don't know if it will be acceptable to a large number of people. The trap we're caught in, if you will, is the fact that in most years there-- even with the increase in frequency of droughts, there is an adequate supply; and if in those years people want to maintain a system that uses water less efficiently, how far does the District go in terms of pricing, which is one alternative, or other things, to restrict that use? And I think over time we have to get to a much more efficient use system, the question is how to get there. Sort of a--

VORSTER: Yeah, I would think that you could create incentives, financial incentives, for putting this-- I think eventually, as you say, you want everyone-- would like ideally to go on some kind of irrigation management system. I think Desert Water Agency has shown that it can actually be used on a residential level with tensiometers and whatnot, and-- in Tucson, of course, a good example, where they were forced to shift over into more dramatic, drastic landscape management. So I guess I'll make a statement--I would encourage the District to look into that even more as a potential because I think there's a great potential there, and uh-- everyone wins in the end, because if you use less water as a large irrigator, you don't have to pay as much.

GILBERT: That's right.

10 VORSTER: Uh-- I also want to know what the District thinks of the San Jose retrofit program and the claim that they are making in terms of success, and why-- or whether that could be applicable to the East Bay MUD situation?

GILBERT: Well, Julie's here, I have to be careful.

(Laughter) Their program is designed to reduce inside water use primarily to protect the capacity of their sewage treatment plant. It is not a program designed, although it has that effect, designed to reduce water demand for the purposes of correcting a water supply shortage. In fact, there's been some argument, I read in the press, between the water utility that serves San Jose and the Regional Water Agency over whether or not they should have any conservation program at all this summer. So, the City of San Jose, in order to achieve a reduced sewer flow, has been implementing that program. They have advertised it by saying it will save ten gallons per capita per day. There isn't any data to prove that. We think that the estimate may be high.

VORSTER: I-- I heard a presentation by them, by one of their people, and they are saying that they did have some follow-up data last year, or actual measurements. I think the book's still out.

GILBERT: That's the way we feel.

VORSTER: But what-- I was impressed with the San Jose program and I-- I stress this-- that good conser-- that a bad conservation program is worse than no conservation, and I was

impressed that San Jose really did research uh-- the various devices that I guess they are using, like their shower heads. And I was impressed that they chose some very good shower heads and I would just recommend that the East Bay MUD-- I assume they are looking into good quality--

KOLM: They're available now.

GILBERT: Yes, we have--

VORSTER: The reason I-- 'cause I've had feedback from people who find the-- the toilet kits to be not very good in some circumstances. The bags just don't-- you know, they get in the way, they don't work; of course, they don't displace that much water while the toilet dams may or may not be any better.

I-- I hope you are not relying on just one, or you're looking at a range of different things that you could implement, in terms of toilet--

GILBERT: Yes, we are. In fact, there is one new development in the toilet area that I think is worth serious consideration. Monterey County recently required that homes that are sold be-- replace the toilets with an ultra low-flush toilet which would use only a gallon and a half, which is a real savings over the earlier versions of five or seven--

VORSTER: Uh huh.

GILBERT: --and half the state-- current State standard-- the results on that program are not in yet, but I think it has a lot of potential. In fact, the City of Los Angeles has been looking at a gradual program with a view toward replacing toilets over time, and I think the potential gallonage savings are substantially larger than the inserts in the toilets.

VORSTER: I agree. I hoped that maybe-- I think from what I've seen, there are some very good toilets that use only a gallon and a half. The last question on drought supply, uh-- could you explain-- the calculation you said-- in order to achieve conservation that would have the same level hardship that was experienced in 1977, it would actually be a 35 percent reduction, and I-- I assume it's because of efficiencies that are in place, mainly in the industrial area?

KOLM: Well, keep in mind that our largest customer reduced demand from about 23 million gallons a day down to about 13.

VORSTER: --the oil refinery.

KOLM: Correct, and there've been other very significant savings, both in the industrial and the commercial areas. Also, I think you'll find that some of the older parts of our residential part of our system are still in the range of about five percent below where they were prior to the drought in 1977. So there is kind of an ongoing increased efficiency of water use in the District, but most of its in the industrial.

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VORSTER: Given that, I think that's the way I understood it, you talked about trying to reduce the hardship on District customers down to a 25 percent overall level, and in order to do that, the-- in order to get down to that, residential people would be asked to-- they could go down from like 44 percent to about--

KOLM: 49-- 30--

VORSTER: 35-- 49--

KOLM: So, it's a one-third reduction--

VORSTER: Well, 49 to 44-- in order to achieve-- have the same level of hardship today, residences would have to cut back about 44 percent; in order to achieve a 25 percent overall reduction, they'd have to go down 35--

GILBERT: --we're saying that's as much as they can cut back, given the same level of hardship.

VORSTER: So, in reality-- my interpretation is that there'd be a 9 percent-- the people could use 9 percent more-- you know, from 44 to 35 in order to uh-- ach-- you know, if they were at 44 percent, they'd have the same level hardship as in 1977. If they cut back 35 percent, and everybody else kicked in, you'd have overall 25 percent reduction. So it's really a 9 percent difference--

KOLM: --percentage points.

VORSTER: --yeah, 9 percentage points reduction in hardship, I guess. How that translates to the individual person and homeowner, I don't know, but is that--

KOLM: Again, that's-- the 35 percent even is an average throughout the District so-- you have to look at different areas.

VORSTER: What that translation is for some people might be tough, and other people, you know--

KOLM: Still a significant reduction.

VORSTER: Those are my questions for now. I'll probably have more in writing, but thank you very much for--

GILBERT: Thank you, Peter. I'm glad to see your efforts rekindling here after your good contributions to the Citizens Committee efforts. I thought that was really great. Are there

any other people who did not fill out cards who would like to make comments or ask additional questions?

Yes, sir?

QUESTIONER: I forgot to make a comment. When the copy of the management report and the EIR were sent to me, there were sent to Buckhorn, California. (Laughter) The post office sent it to Fremont first, and finally it came to Castro Valley.

[TAPE CUTS OFF.]

[TAPE BACK ON AFTER SHORT LAPSE]

GILBERT: Yes, sir?

11 QUESTIONER: Has the pumping operation back up to Camanche begun?

GILBERT: I don't know if you heard that. Has the pumping operation back to Camanche begun? The answer is no, it has not; however, we have purchased materials and the engineering design is well along. The target in-service date is July 15th, and the-- it appears that our-- our rather detailed set of permitting requirements are going to be the major hurdle, not the engineering, design, construction hurdle. We need a permit from the Corps of Engineers, we need a State Water Resources Control Board review with comments from the Department of Fish & Game, and uh-- we probably will hear from the downstream users on the Mokelumne that Peter mentioned and others as well. We're working our way through that. The initial reaction was reasonably hostile. As we spend a lot of staff time on it, I think we're beginning to get people to understand this is a true emergency here and that we need some help, and hopefully, it will work out.

QUESTIONER: What would be the capacity or volume then?

GILBERT: About 60 million gallons a day. Roughly--

QUESTIONER: Did you say 60? I'm sorry--

GILBERT: Yes, I think that's right.

SPEAKER: Sixty.

KOLM: Fifty-six or--

GILBERT: Something like that, and there are going to be some limitations. We're going to have to go to some considerable measures to protect the intake against fish egg intrusion, and this sort of thing. We're working on that with Fish & Game. They want very fine screens, but when you get very fine screens, you can't get very much water through them. So we have that struggle. But we expect, hopefully, that we'll get about 5000 acre feet a month, which is a significant quantity of water given the circumstances we're in.

QUESTIONER: I have one more question. On-- you had a slide showing total reservoir storage this year in comparison to '77, could-- it showed that this year was many thousands of acre feet higher--

GILBERT: Yes--

QUESTIONER: --that for I think April 13th.

GILBERT: Yes.

QUESTIONER: Do you know what it is currently in terms of the difference between the--

KOLM: --it's-- were it less than 50 percent of capacity, where the normal level is around 80 percent, Jon?

QUESTIONER: How do we compare to '77 at the same time?

KOLM: We're a little higher than we were in 1977.

[OVERTALKING]

SPEAKER: --quite a bit higher. Are we getting closer and closer to '77 storage or are we--

KOLM: A lot depends on what happens this summer with the response of our customers to rationing.

GILBERT: If we can get the pumpback system in operation in mid-July and we get good cooperation on rationing, we predict we'll be right about at where we were in '77 in September. The reason we're higher than '77 now is because of the way the District's water resources staff has managed the storage on the Mokelumne. We-- last year when the Board indicated that we should go into a voluntary conservation program at 12 percent, at the same time the staff began curtailing downstream releases except for those absolutely necessary to meet the water rights downstream, and we curtailed power production. Part of that was voluntary and part of it was due to some equipment problems we had. The net effect of all of that was to put more water in storage today in Pardee than we had in '77.

QUESTIONER: You look like you're what, about 20 or 30 thousand acre feet--

GILBERT: Actually a little more than that, actually.

QUESTIONER: Jerry, for the interim period, can you review briefly the feasibility of taking in any Delta water at this point?

GILBERT: The feasibility of taking Delta water into the system?

QUESTIONER: Yes. To get some relief as far as--

GILBERT: Yes-- well, there are two ways-- in the first place the District's rights that it hopes to exercise for the Camanche pumpback option are the same rights we've exercised to pump in the other direction; and we would be then limited, if we pumped more water this way, we would pump less to Camanche. So if we can do the Camanche option, that allows us to save the water and at the same time not drink lower quality water. But if for some reason we couldn't do that, we could pump in this direction, we could blend with the existing supply, we'd have to increase the chlorine concentrations at the direct filter plants, particularly, which would result in higher trihalomethane levels, but, for those of you who don't follow that closely -- those are the compounds that are formed in the drinking water system when you chlorinate water that is of a lower quality -- and generally speaking, the more organic material in the raw water, the higher the level of these contaminants. You'd have lower amounts of trihalomethanes, the lower the blend, the higher the other amount, but still within the standard that is set by the federal government, although many people think the standard is too high, and that there should be no threshold on that. But it could be done. We would have taste and odor problems; we would have the significant switch, in my opinion, and I probably shouldn't be saying this, I'll make David unhappy back here! You will have a greater use of bottled water. Our average use of bottled water is in the range of 5 to 10 percent, whereas in Contra Costa Water District use is in the 60 percent range, which is similar to that in Southern California. But, it could be done.

There is another option. That is, to take treated water from the Contra Costa Water District treatment plant, Bollman Plant, and put it into the aqueduct, so mixing untreated water of ours with treated water of theirs. That's a little better, but there are real capacity limitations there. They only have an excess at the max of about 20 million gallons a day, and then there are limits, and we have to build a major facility to get it into our system. So if we were going to use Delta water--

QUESTIONER: Is that a pipeline that you would be using?

GILBERT: Yes, it's not very far, but you have to build a pumping station and other connections and so forth. Uh-- if we were going to do that, I think the District staff's advice has been so far that we should just divert water in this direction from the Delta facility and blend it that way.

QUESTIONER: Do I understand the maximum you could get done would be 80 million gallons, the 60-- is 60 the maximum rights you have out of the Delta?

GILBERT: No, our right is much greater than that. But the physical limitations of the pipelines probably would limit us in that range.

QUESTIONER: 60 or 80?

GILBERT: It's 60 out of the Delta, the other twenty would be the maximum we could get out of the Contra Costa Water District treated water plant.

QUESTIONER: Okay.

GILBERT: Yes, David?

SPEAKER: Would it be technically feasible to pump both ways at once from Briones Pumping Plant? In other words, pump both uphill to Camanche and into the system?

13

GILBERT: You don't mean from Briones, you mean from Bixler?

SPEAKER: From Bixler--

GILBERT: Yes, but you'd have to build some-- make some substantial piping changes and you're limited then by the combined hydraulic capacity. I think the answer to that is generally speaking, yes; is that right Rich?

KOLM: I've heard it would be very difficult hydraulically to do it.

GILBERT: Really?

KOLM: But I don't know what the latest thinking is. It's complicated by the fact that the lift, the increase in pressure that you need going to Camanche is much greater than it is coming into Walnut Creek, so you'd have to throttle, I guess, in one direction while you're pumping in the other direction, which tends to limit the amount of water that you can move that way.

GILBERT: Yes, the lady there?

QUESTIONER: Do you have any ground water resources available?

13

KOLM: We have found in the study in the last couple of years there may be a couple of million gallons a day in the San Ramon Valley and that's about it. But-- it's-- essentially not available.

GILBERT: Historically the water systems of the East Bay have had a significant amount of ground water but over the years, the wells have been abandoned, either due to poor quality or low per-

formance. The small systems out in the hotter areas all were based on ground water use or springs In the hillsides, and have all been almost abandoned, but surprising, there are at least a thousand operating wells that individuals own or operate in the District's system-- within the District's service area, but they're very small capacity wells.

28 QUESTIONER: Could you explain how you determine that you were allocating the costs to terminal storage, how you came up with a 33 percent, 67 percent breakdown for existing and new customers only. I tried to follow the logic and--

KOLM: Well, let me see if I can walk through that with you. Uh-- the first thing that we did was to take a look at the allocation between shortage and security, and the amount of water that we need for shortage, looking now at the year 2020 and that level of projected demand. The amount of water that we would need for storage for shortage is 95 thousand acre feet. The amount that we need for security against an outage in the Delta is 145 thousand acre feet. So, what we said is, alright, the first-- and these are two problem solutions going hand and hand. They're overlapping. So the first 95 thousand acre feet of storage is shared between the security problem and the shortage problem, and then the balance, the other 50 thousand acre feet, is assigned entirely to security. Then we took a look at the security and the shortage and said now how do those relate to existing customers today versus the customers that will come on board between now and the year 2020. And when-- in particular, when you look at the question of shortage, and the District's

present 39 percent limit on rationing, or even a 25 percent limit on rationing, we essentially have enough storage available today with those strict rationing limits, so you'll find in the charts that show the allocation that there isn't any allocation of shortage improvement to existing customers. It's all new customers. But when you look at the security requirement, there isn't enough water even for existing customers today. There's only four or five months of storage, and we need, for our planning purposes, 13 months of storage. So there the security allocation is further spread between existing and future customers, based on their relative demand.

QUESTIONER: That's where you got the two-thirds--

GILBERT: So you combine all of these-- I'd be happy to go over with you sometime later, but you combine these and you have a composite percentage then after you've gone through the two allocations -- one between security and shortage, and then taking those and saying who does that get assigned to, existing customers or future customers. The allocation of security for existing customers also takes into account that existing customers already have four or five months of storage, so they just have an additional amount they have to bring in, whereas new customers have to buy all of the storage that they need for security as well as all of the storage that they need for shortage.

GILBERT: Yes, ma'am?

QUESTIONER: (Inaudible)

GILBERT: Could you give us your name, please, I think you're the only one--

QUESTIONER: Amy Fowler from Santa Clara Valley Water District. I'd like to know what your reduction in 1976-77 made mandatory conservation . . . from rationing?

KOLM: Yes, there was a rationing program that began in February of 1977 and continued until I think it was in early January 1978 when it was ended. So it was about a year, about 11 months that it continued.

FOWLER: Did you have any figures that you exposed to the public as to your target at that time?

KOLM: Yes. We were seeking a-- initially I think we were looking at a 25 percent reduction and then that was increased -- was it 35 percent we were targeting then, Joe? And the 35 percent was the target for the year and actually achieved 39 percent.

QUESTIONER: What would happen if you had the maximum credible earthquake on the Hayward Fault in terms of outtages systemwide; what would happen to Buckhorn and the facilities you build around Buckhorn, given that it's fairly close to Hayward fault?

KOLM: Well, Buckhorn Reservoir would be designed to withstand the maximum credible earthquake that would be expected. I mean, we've gone through our system; we've rebuilt Upper San Leandro Dam; we reinforced other dams in our system to withstand the earthquake that might be expected, the ground acceleration. If you have a major earthquake on the Hayward fault, I think the forecasts are that you'd have considerable damage throughout the area, and the extent to which the District's distribution system

would be disrupted, you know, it's hard to pinpoint. It depends on where the epicenter would be, whether it's within the service area or further to the south.

QUESTIONER: Well, presumably all your reservoirs, dams (Inaudible) off the distribution system probably suffer.

GILBERT: Yeah, I would just add to what Rich said that the three or four vulnerable points are the crossings of the Hayward fault by the pipelines that go through the ridge from the terminal reservoirs into the treatment plants at San Pablo treatment plant, at the Upper San Leandro treatment plant, and the Claremont Tunnel, which is treated water coming out of the Orinda Filter Plant. Those three in particular are the most vulnerable. The District has stockpiled material. If the kind of circumstances occur that we would lose all three, we would have an exciting time around here. There is a great deal of storage, treated water storage, that's one area if you compare the District with other utilities. We have more treated water in storage on the west side of the hills per capita, I think, than any major utility that I'm aware of. And that's been purposeful because of the vulnerability.

[END OF SIDE TWO, TAPE ONE]

CONTINUATION OF STAFF HEARING OF MAY 18, 1988, ON WSMP &
TECHNICAL REPORT - SIDE ONE OF TAPE TWO

GILBERT: Yes.

3 QUESTIONER: My understanding is that in 1985 the Board adopted rationing as an element of water management, and my question is, was a written contingency rationing plan put in effect then, or has that been more recent?

KOLM: We published in November 1985 our Urban Water Management Plan which describes the steps that would be taken in a period of drought which is a follow on to that policy.

GILBERT: Yeah-- I would add that that plan was prepared under a State law that East Bay MUD authored that indicated that all urban utilities should have such a plan. And-- those are now available statewide, and the state can summarize what utilities are doing. By the way, we are also working with other utilities as this hearing goes on to publish a statewide summary of current urban water conservation activities. There's been a lot of public concern that uh-- every area should participate, and so this is an effort to describe-- and they aren't all the same -- the efforts that are going on in Southern California and San Francisco and East Bay and so on.

QUESTIONER: I don't think it's been well understood, at least in our area.

GILBERT: I think that's generally true, including Southern California. Any other questions or comments?

QUESTIONER: I'll have one last one.

GILBERT: Okay. Fine.

QUESTIONER: Uh-- you talked about Buckhorn being used only as a standby supply for either security purposes or for drought supply. How would you-- would you put that in -- I don't want to say put it in writing, but-- what would prevent Buckhorn from being used as part of the regular supply, if, let's say, your growth occurred much more than you projected?

KOLM: Well, if you were going to use it for then-- what we call re-regulation, in other words, to provide storage of water that's brought down in the winter time for use in the summer to accommodate some great increase in demand, then you would have to eat into the security and the shortage protection that you have. It would have to be a deliberate step to say, all right, instead of protection for 13 month outage, or against a repeat of a drought like 1976-77 with some small amount of rationing, you'd have to do away with that standard. You'd have to provide more harsh level of rationing and you'd have to reduce the number of months that you could tolerate an outage in the Delta.

QUESTIONER: So you-- the District doesn't intend to do it, but there's that potential of growth occurring beyond your projection, and you'd have to use it in a re-regulation program, you'd lose some of the security that it would provide?

GILBERT: That's true, but there's another factor, too. And that is should it come about that the District can get part or all of its American River entitlement, that you then have another insulating factor that would protect against that kind of thing

you talked about. That is, you have a greater level of supply and you're in a position where you don't have to-- the pressure to do what you said would be reduced.

19 QUESTIONER: Do you expect Buckhorn to stay in a pretty relatively constant level-- from an aesthetic point of view, you don't see a lot of reservoir fluctuation?

GILBERT: I think-- the presentations that I've seen on that are that it would be similar to the Briones operational mode. It does fluctuate somewhat, but the principal amount of storage would be maintained reasonably constant. At least, that's the current proposals.

14 QUESTIONER: Jerry, I don't know whether you want to comment on this, but-- if you do, what is your opinion of the possibility of resolving litigation issue in the near future, as far as the American River?

GILBERT: Well-- (laughter) I-- it's been a long haul, and started before I was here, and Rich has experienced it a good deal. Do you want to comment on that?

QUESTIONER: (Inaudible)

KOLM: I guess the only indication of-- the first indication we have is the report that was produced by the State Board staff last year, which was favorable towards the District and its ability to take water off Folsom South Canal and the need to do it. We're waiting for the actual report from the State Board. We expect that soon, and then it goes back to the trial court, and where it goes from there I guess is hard to determine.

GILBERT: It's-- I think that the State Board staff report may be a watershed in this effort. However, there are other factors, including the feeling of Sacramento area elected representatives that they have a prior right to American River water. Even when it's flooding in Discovery Park-- (laughter) that's my editorial comment. (Laughter) But, that is a realistic problem, and it's very difficult to say-- it's a little more easy to predict what may come out of the litigation now, although it's by no means sure. But it's not as easy to predict what may come out of the political side of the whole thing.

Well, any other comments? I've certainly appreciated a chance to have this discussion and to see Peter again, and others who from W.A.T.E.R. who have made comments. All of the comments you've made will be included in the formal record of this hearing, and will be responded to as part of the EIR process. I again invite you to attend the hearing a week from tonight, and any other hearings that the Board may decide to hold. I would just take one moment to see if Director Kofman, our Vice President, wants to add any comments to this. Ken?

KOFMAN: Thank you for coming.

GILBERT: All right. Thank you all very much.

PUBLIC HEARING ON EBMUD WATER SUPPLY MANAGEMENT PROGRAM OFFICE OF PLANNING
MAY 25, 1988 -- KAISER CENTER AUDITORIUM, OAKLAND, CALIFORNIA

SKAGGS: This is a regular meeting of the Board of Directors of East Bay Municipal Utility District. We're going to start first with roll call.

MALCOM: Directors Burke?

BURKE: Present.

MALCOM: Hill?

HILL: Here.

MALCOM: Kofman?

KOFMAN: Here.

MALCOM: McLean?

McLEAN: Here.

MALCOM: Simmons?

SIMMONS: [NO RESPONSE HEARD.]

MALCOM: Warren?

WARREN: Here.

MALCOM: President Skaggs?

SKAGGS: Here.

SKAGGS: I'd like to make a few opening remarks about the purposes of this hearing, and perhaps some predictions about the future of the process although that remains to be decided by the Board as we move through the process. I think I can make some reasonable predictions. First of all, the efforts to develop a water supply management Plan have been ongoing literally for a number of years, and they've involved a significant effort by the District to get citizen input and therefore, we are particularly pleased to see all of you here tonight. Several years ago, there

was a Citizens' Advisory Committee which met for many months and presented a report to us. We had a discussion paper that was mailed to a wide mailing list last year, trying to achieve some direction in this process, and then most recently, we have mailed again to a wide mailing list a summary of what has become a staff recommendation for this water supply management plan. The thing which has achieved the most notariety is a recommendation for a terminal reservoir in the Buckhorn Canyon, and I want to explain several things about that to you.

First of all, the water supply management plan, as you'll see in a few moments, encompasses many issues in addition to terminal storage.

Secondly, terminal storage is only one possible alternative towards planning for our future, and really, if we're speaking of Buckhorn, the decision has to go, first of all, is it necessary for us to build more storage; secondly, should it be terminal storage, that is, in our parlance, storage this side of the Delta, as opposed to additional storage in the Sierra, and that is really a rather simple answer. . . if we're going going to have more storage, it should be this side of the Delta. There really are no places to build more in the Sierra for us that would work. And then after you get through all of those questions, if the answers are yes, and there are varying positions on whether we should build more storage or not, and you'll probably hear some of those tonight, then if the decision is to build more storage, then the question is, where do we build the storage, and Buckhorn is only one possibility out of three which are presented

as alternatives to us. It is a possibility or a location which is favored by the engineers, but as I think we all know, engineering is only one part of life, and one part of our society, and we need to understand the-- perhaps there are other engineering opinions, but we need to also understand opinions that people may have on non-engineering factors which would address the issue of whether something should be built at Buckhorn.

So, in general, we are a long way from making a decision and we're in the midst of a lengthy process which hopefully will chart the course for this District over the next 20 or 25 years.

The purpose of the hearing tonight is two-fold. One, we are preparing an environmental impact report. As the law requires, a draft has been prepared and it has been circulated, and it is available to any of you who wish to request it, and it expands upon the things that are said in the summary which most of you probably have. We are seeking comments on that draft, and the law requires that when those comments are given to us, either orally tonight or in writing, and if it is-- if there are complicated comments, it would be helpful to have them in writing even if they are given orally tonight; then the law requires that the authors of the environmental impact report respond to those comments, make any changes in the report which are called for by the comments; and then finally, that report, in its final form, including the comments and the responses, will come to the Board of Directors for our decision as to whether it is sufficient for use as an informational document to aid us in making our decisions.

So purpose #1 tonight is to give us input about that draft environmental impact report. Are there issues that should be covered that aren't covered? Is there more detail required? Are there factors which you believe are important from an environmental viewpoint that should be included in that document which then serves as the basis for our decision as one very important factor which we must consider?

The second purpose of the hearing tonight is to give us substantive input on the plan. The summary is available to you. If you have substantive input on the alternatives, this is one time when you can present that to the Board. We would welcome that.

As for predictions of where we go in the future, we need to have at least one more hearing on this subject. We would have at the minimum a public hearing at a regular board meeting prior to making any decision. It could be a hearing at which time decision was postponed, or it could be a hearing which immediately followed into a decision. The Board will need to make an initial decision-- we've got all sorts of decisions to make-- but a decision as to what process we follow from tonight. There'll be at least one more hearing. Director Burke and others have shown some inclination for some other hearings in other parts of the District, and I think in your comments tonight we would welcome any comments you might make on what process you would like to see us follow from here on. More hearings? Where? What do you think is necessary for us to do in order to get a reasonable amount of public input and yet move forward with a project which

has been pending for a long time, which is the development of this plan?

BURKE: Mr. President, point of procedure here, I'd like to add in your discussion of possible future meetings; I think the Board also needs an opportunity to go over the technical report, the Environmental Impact Report, and have an opportunity to ask questions and so on. And, I, for one, think there's another alternative which has not been covered. That is what I will call the "All Conservation and Reclamation Alternative" which I don't believe is in there, and I would like the Board at some point to schedule that-- we've talked about it, but it hasn't been scheduled yet, and I just don't want that to get lost in the shuffle. So I'd like to request that that be added to our schedule.

SKAGGS: So after we finish here this evening, the Board is going to have to consider what process to follow and any input that you would like to make as to process would also be welcome; so, first of all, comments on the EIR; secondly, substantive comments on the recommendation which staff has presented to us in the form of a plan; thirdly, any comments that you might want to make as to process. We do have a staff presentation which I hope you will find informative in which we will try to set the stage with. It's a bit longer than I would like to have because we do want to get on to hear what the public has to say; on the other hand, it's a good idea, I think, for all of us to start from a common base. After that, I have two public officials who are here who have asked to speak to us, a councilmember and a mayor. If there are any others who'd wish to speak, I'd like to know.

Generally, since these folks have lots of night meetings, and lots of duties, we'd like to let them go first and they're also representing large constituencies. After that, our experience in the drought allocation hearings was that it worked rather well to ask that those who come next do one of two things: either agree to make their comments within a three minute period, or drop to the end of the list. That gets the most input that we can in at the beginning of the hearing, and I'll be taking those speakers in the order in which the cards have been given to me, which has been attempted to be the order in which they were turned in to our secretary. We've got a lot of speakers, and so, to the extent that you can incorporate other persons' comments and not be repetitive but still make your point, it would be appreciated by not only us, but the other members of the audience.

So with that overview, Jerry, would you please get us started. I should introduce the people who are here. There are signs here. First of all Director Warren on my left who has parts of Oakland, Piedmont, Moraga and Orinda; Jack Hill, who represents western Contra Costa County; Helen Burke who represents Berkeley and El Cerrito; Walt McLean, southern Alameda County, San Leandro area; Ken Kofman, Alameda and a portion of Oakland. The empty seat to my right, your left, is Ken Simmons, who represents a portion of Oakland not represented by the others. At the other table, starting from the right, Jerry Gilbert, the General Manager of the District, who is the number one, fully employed full time person for the District; next to him, Ted Way, our Chief Engineer who runs that aspect of the

District which is extremely important; next to him, Bob Maddow, our legal counsel, and next to him Paula Malcom, who is the Secretary of the District. So now that I've--

KOFMAN: Don't forget yourself.

SKAGGS: And I'm Sandy Skaggs, and I represent the San Ramon Valley and the portions of Walnut Creek, Pleasant Hill and Lafayette which are within the District. Okay, enough introductions. Jerry . . .

GILBERT: President Skaggs, members of the Board, ladies and gentlemen, our presentation this evening will be in two parts. The first part, a background overview of the water supply management plan, presented by Rich Kolm, the Assistant Chief Engineer for Planning, and then I'll follow that summarizing the staff recommendations and the basis for those recommendations. Mr. Kolm if you would proceed:

KOLM: If we could have the lights. President Skaggs, members of the Board, ladies and gentlemen. What I'll do is say a few words about the District and then give the highlights of the water supply problems and the alternatives for solution that the district is facing. The principal source of supply of the District is the Mokelumne River. This diagram shows that the source is precipitation in the Sierra Nevada in the upper left, the water is diverted in Pardee Reservoir in the center of the diagram and then delivered via the Mokelumne Aqueducts into the East Bay area. The District also operates Camanche Reservoir in the lower left on the Mokelumne River, operates it for flood control and also to meet its obligations downstream of the

storage reservoirs. This is a planned view of the District's water supply system. The watershed in the Sierra is on the right and the red line represents the three Mokelumne River Aqueducts which extend a distance of more than 80 miles from Pardee Reservoir down across the Delta and into the District service area, which is shown on the left. You will also note at the top of the map the red line representing the Folsom South Canal, the District has had a contract since 1970 with the U.S. Bureau of Reclamation for an additional 134 million gallons a day. Because of litigation that is not currently an alternative being considered. The District supply enters the service area in the vicinity of Walnut Creek. The water is treated at six different filter plants. These are shown on the map. The ones in yellow take the water directly off the Aqueduct System and deliver most of the water to the District's customers.

QUESTIONER: Excuse me sir, this thing is out of focus here.

SKAGGS: There that's better. I thought it was only my eyes. When Moraga is in focus San Ramon is out of focus.

KOLM: The best I can do I guess is get the middle of it in focus. My apologies. As you can see the District serves an area from the fringe of Hayward on the south to Crockett on the north and easterly into the San Ramon Valley including part of Walnut Creek and part of Pleasant Hill. The District has had a steady increase in the number of accounts in the District. These are the number of customers that are connected to the system-- that is the orange line -- which shows there's been a 20% increase in the last 25 years. The blue line represents the

amount of water that's being used by those customers and you can see there was a steady increase until the early 1970's when it began to level off. There's the dip during the rationing during 1977 and the demand has gradually recovered up to a level of about 220 million gallons a day, about the same as it was prior to the 1976-'77 drought. That chart indicates that there has been a growing efficiency in the way that our customers use water. The District's water supply planning is based on an ultimate boundary, which is the yellow line on this map. The District has an obligation to provide service to development that's approved by cities and counties within this area. There are 1.1 million people that the District serves in 20 different cities in 15 communities.

As you will note there are a number of water agencies around the District, from Martinez on the north and Contra Costa Water District, Dublin/San Ramon Services District and the Hayward Water Department. The one area of significant potential growth outside the ultimate boundary is the orange area on the lower right, which is the Dougherty Valley-Tassajara area. This has not been included in the District's projections of water demand. You might also note that the District's Board of Directors recently adopted a moratorium on any annexations outside of the ultimate boundary (in other words, the yellow line).

The current demand on the left here is 220 million gallons a day. The projections based on demographic work by ABAG, as well as State Department of Finance and contact with the various cities and counties that we serve, indicates a growth in projected demand up to a level of something between 270 and 280

million gallons a day by the year 2020. A large part of that increase in demand is residential growth. The three bars in the middle represent the number of households in the District divided into three areas. The large bar on the left is western Alameda County, which includes Oakland, Berkeley and down as far as Castro Valley and San Leandro. You can see that most of the households exist in the western Alameda County portion of the system. There's a smaller number of households in western Contra Costa County and in central Contra Costa County. The shaded areas on top of those bars represent the projected growth in number of households by the year 2020, and as you can see, the growth is spread throughout the District. The three bars on the right are the water demand that relates to those households and, again, there is growth throughout the District, but the growth is greater in central Contra Costa County where the unit use is higher.

The District is focusing on three basis issues in developing its water supply management program. Those are: security, shortage, and safety and health. First, let me talk about security. The problem here is pipe breaks, particularly pipe breaks in the Delta which threaten an outage of the District's water supply. The objective of the water supply management program in this case is to provide security against floods and earthquakes in the Delta. As I said earlier, the three aqueduct pipelines cross a portion of the Delta, the southern part of the Delta. . . a number of islands which range between ten and fifteen feet below sea level. The red circles indicate three underwater crossings

where the pipelines go under the rivers. For a distance of nine miles in the Delta, the Aqueducts are elevated on supports above ground. This diagram shows those three aqueducts, the oldest one, No. 1 was constructed in the 1920's, No. 2 in the 1940's and No. 3 in the early 1960's. The problem that we're faced with in the Delta as developed by our outside consultants, is the foundation conditions that underlie both the levees as well as the pipelines. The peat soils provide no lateral support, no structural support for either the pipelines nor sufficient support for the levees. Also we're faced with the loose sandy silts, which is a foundation condition that tends to liquify under major ground shaking due to an earthquake. The vulnerability of the District's three aqueducts were brought into focus in 1980 when Jones Tract flooded due to a levee failure. The railroad embankment in the lower part of this picture temporarily restrained the water, on the lower side of the picture, but when the train was crossing at one point the embankment failed and the on-rush of water began to erode the foundations under the three aqueducts. Luckily the levee break on Lower Jones Tract had been closed so the on-rush of water did not completely submerge the three aqueducts. Normally, sea level is higher than the three aqueduct pipelines.

When the water was finally pumped out of Jones Tract, it revealed the serious erosion that had taken place under the three aqueducts up to a depth of about 50 ft. in some places.

In the event of an outage, such as a disruption of the water supply aqueducts in the Delta, the District depends on its terminal storage. You heard the term mentioned earlier this

evening. This is San Pablo Reservoir, which is one of the five reservoirs in the East Bay hills. We currently have enough storage as you can see in the lower part of this chart, the blue lines, the existing storage, gives us about four to five months of standby capacity. The red lines indicate the periods of outage that have been estimated under various earthquake conditions, also assuming that the islands would be flooded by levee failures at the same time. If we look at the more typical case, which is the middle red horizontal bar, you can see that we're subject to an outage that's been estimated at about 13 months. For us to survive an outage of 13 months means that we would have to increase the amount of storage in the East Bay area if we were to continue to depend on storage for security.

The second issue that we are faced with with the water supply management program is shortage in time of drought where the objective is to provide the supply to meet dry-year conditions and, of course, we're in the midst of a drought period right at the present time. The District, as I said earlier, depends on the precipitation in its Sierra watershed from snowfall primarily and runoff via the Mokelumne River in Pardee Reservoir. It's at Pardee where the water is diverted into the Mokelumne River Aqueducts. When that precipitation is not sufficient, then the run off is not sufficient to meet the demands of the District, then the District has to rely on, again, terminal storage in its system to get through a dry period. This is a photograph of Briones Reservoir above Orinda with San Pablo

Reservoir in the distance. This chart indicates what happens when we get into a dry period such as we're in right now. Normally the average amount of storage in the system is between 600 and 700 thousand acre feet and fluctuates during the year. As you can see on the top curve. In 1976 and '77 and again in the current period, the District has had to rely on that terminal storage to help meet the demand and it begins to pull the amount of storage down, as you can see on the two curves that are descending. Another issue with regard to shortage is the rationing that's required. To get through our shortage, the District's water supply planning assumes that there will be some limited supply available from the Mokelumne River, that we will use terminal storage, and also that there will be a reduction in the level of demand of the water used by our customers. In 1977 all of our customers together reduced the demand by 39%, as you can see here. Single family customers reduced their demand by almost 50% as part of that effort.

We're finding that today with the increase in water use efficiency through conservation and also the major changes made by a number of our industries, that the achievable level of conservation for the same hardship is about 35% reduction-- and that's projected to decrease to around 31% in the year 2020. One of the considerations in the water supply management program is to reduce the hardship during the need to reduce demand-- in other words, during mandatory rationing. One approach is the right hand column, which is to reduce all customers by only 25%, which means single family customers would experience a 35% reduction.

The current policy of the District in terms of it's water supply planning is to take a look at a repeat of conditions like 1976-77 and limit rationing to 39%. The chart on the left shows that when the yellow bars . . . the projected increase in demand I showed you earlier . . . that the projected demand will cause rationing to be greater than 39% beginning about the year 2000, or a little after the year 2000 when demand gets up around 240 million gallons a day. If the policy is changed to a 25% limit on rationing for our water supply planning purposes, then we would exceed that limit on rationing probably around the year 1990, which is shown on the right hand chart.

In terms of the amount of storage that's needed to meet shortage conditions during a drought, the first bar on the left shows the amount of storage that we have in place now in the terminal reservoirs, about 138 thousand acre feet that's usable. If we maintain a policy of a 39% limit on rationing, by the year 2020 we'll need another 55 thousand acre feet of storage, which is the second bar. The third bar shows that with an improvement in the level of rationing, in other words reducing the hardship, we need even more storage by the year 2020, which would be an addition of about 95 thousand acre feet.

The third issue that the water supply management program deals with is safety and health and the concern is the threatened pollution and contamination of the water supply. The objective in the plan is to maintain high quality water. The District has in process now a treatment improvement program to modernize and upgrade its six water treatment plants. In addition, the

District owns 25 thousand acres of watershed land around the East Bay reservoirs, this is San Pablo Reservoir, and there's another 20 thousand acres which are owned by the East Bay Regional Park District and other agencies. Not all of the land is in public ownership. There is still some land which is in private ownership within the water sheds and some of it has the potential for new development. This potential for new development creates a risk with regard to the quality of the water supply with the urban run off that could be expected.

What are the alternatives that are considered in the water supply management program? First of all, in the Delta there is a need to continue to maintain and upgrade the levees around the various islands just as minimal program to maintain the current level of risk. Secondly, we can proceed to do some additional studies to determine whether or not its possible to reinforce the levees at critical points as well as improve the supports under the various-- under the three aqueduct systems. Another alternative is to construct, and for security purposes, to construct a new aqueduct or a pair of aqueducts across the Delta parallel to the existing aqueduct system. These would provide a secure facility against earthquake as well as floods and would be constructed at least at the full capacity of the present aqueducts and would constructed at a cost of about \$265 million. But such an improvement would only provide the solution for security problem. Another alternative that has been given serious consideration and is discussed quite a bit lately, is the water conservation program of the District and the projected

measures. The program includes education in the classroom, reducing the water use of landscaping and various other measures. The current program, which when fully implemented by the year 2020, is projected to save an additional 4 million gallons a day. This shows the various elements of the program. There're also listed in the summary that you have.

The water supply management program developed by staff proposes some additional measures which could save an additional almost 3 million gallons a day, expanding the water-saving device distribution, water outage for industrial processes, expanding landscape consultations, irrigation management of large landscaped areas, as well as some other measures which wouldn't necessarily save quantities of water but would help enhance the program. The summary that you have also shows that there are some theoretical measures which, while they are not being proposed as part of the staff's water supply management program, these measures have the potential for some additional water savings. The problem here is that they have unproven records and in some cases require mandatory measures. And these are things such as mandatory toilet replacement-- and let me point that out in particular, because it has a potential for a more significant savings of almost 13 million gallons a day. This would require replacement of all toilets in existing homes over a period of years to ultra-low flush toilets that only use about one and a half gallons a day. The cost, for example, of an element like that would be \$300 or \$400 per toilet.

Another element in the proposed water supply management program is wastewater reclamation. One part of that is the on-going work with the Chevron Oil Refinery to develop the use of wastewater for cooling purposes, in this case with a potential of 5 million gallons a day. Like water conservation, wastewater reclamation doesn't have a potential for a large reduction in demand, but certainly they are both an important part of the water supply management program.

Other supply considerations would include the Folsom South connection which I indicated earlier. The District has not constructed a connection to implement the contract with the Bureau of Reclamation. The second one would be an exchange with the Woodbridge Irrigation Districts. In this case, if those districts use water off the Mokelumne River, if an alternative supply could be provided to those districts and if the districts would agree to it, then that might make more water available to East Bay MUD off of the Pardee Reservoir.

The District is currently pursuing a project trying to implement the pumping of water out of the Delta using one of the aqueducts backed up to Camanche Reservoir which would serve the purpose of like a Woodbridge exchange. In this case the water from the Delta would be used from Camanche in the Lower Mokelumne River to meet the District's obligations.

Another alternative which is often talked about is using water out of the Delta, and this is an alternative which the staff has investigated as part of the water supply management program, and one of concerns is the ability of the District's existing water treatment plants to treat the quality of Delta water, as

well as the conflicts with the District's policy on water quality. And in particular when we talk about the need for security, one of the problems that we're faced with is the potential for all of the islands being flooded in the event of a major earthquake and at the same time the supply from the Mokelumne River could be disrupted. In that case the saltwater drawn up from the Bay would probably be unusable and there would be no Mokelumne water to blend with it.

Another alternative that is discussed is inter-ties with other agencies. The only other agency nearby that has water of similar quality to the Mokelumne River is San Francisco's Hetch Hetchy supply. Hayward Water Department takes its supply from Hetch Hetchy and currently we have connections with Hetch Hetchy where-- with Hayward-- where we can bring in 5 to 10 million gallons a day. Now that's not enough in the event of an outage or a shortage. If we were to construct a direct link with the Hetch Hetchy system between Mokelumne Aqueducts and Hetch Hetchy, this could be done at a cost of probably around \$100 million. One of the problems there is whether or not water would be available from the Hetch Hetchy when it's needed by East Bay M.U.D.

Another alternative and the one that's getting the most focus right now is water banking, or the construction of additional terminal storage in the East Bay Area. Water banking, if we were to construct 145 thousand 145,000 acre feet we could provide the security against an outage in the Delta which could last for as much as 13 months, and this with a limitation on rationing of 25%. That same storage would give us the capacity that we would

need to get through droughts such as we're in right now with very minimal amounts of rationing. We have looked at a total of about 26 different sites for terminal storage and have focused on the three most feasible sites, which are Pinole reservoir up just east of Pinole above San Pablo Reservoir, the Buckhorn reservoir site which is between Moraga and Castro Valley on the Upper San Leandro watershed, and the Los Vaqueros reservoir site, which is a Contra Costa Water District project. As I said, the Pinole watershed is owned by East Bay M.U.D., although the water for some of the watershed lands up to the ridge lines around the reservoir are not. One of the problems with the Pinole project is that we could construct only 45 thousand acre feet, which would not be sufficient for the security problem that we're facing in the Delta. The Los Vaqueros site is currently being acquired by the Contra Costa Water District. If the District were to participate in a joint project with Contra Costa Water District, the staff is recommending that it be only Sierra water that's put into that reservoir. One of the things we found is that the share of the cost, in other words the cost for the capacity needed by the District, would be slightly higher than the Buckhorn site.

Buckhorn reservoir would be constructed with its dam on one arm of Upper San Leandro Reservoir. As I say, this is between Moraga and Castro Valley, East Oakland. The current uses of the district's watersheds like the Upper San Leandro/Buckhorn area are recreational hiking, as well as cattle grazing. This is a picture of Buckhorn Creek in the Buckhorn watershed.

As I said earlier, the District owns 25 thousand acres of watershed lands and there are an additional 4,850 acres which have the potential for acquisition for enhancing that watershed and also for enhancing the recreation on it. Of that 25 thousand acres, 2,900 acres are water surface in the five terminal reservoirs that I've talked about. Buckhorn reservoir would have a water surface area of 1,200 acres as shown up there and if Pinole should be constructed it would be 800 acres. Looking at the Pinole area, the orange area is the site of Pinole Reservoir, San Pablo Reservoir is the blue on the lower left and then Briones is just to the right of it. The areas in pink are the potential and possible land acquisitions in that area to expand the watershed and to provide the protection of the watershed that's needed. At the same time the trail system could be enhanced. The yellow lines are the existing trails in and around Briones and San Pablo Reservoirs. The white are the possible increase in the systems.

In the southern end, the orange here represents the Buckhorn reservoir, which as I said sits on an arm of Upper San Leandro. There is a small . . . in the pink areas just above it . . . there is a small part of the property that's needed for the water surface, but most of the possible acquisition would be for enhancement of the watershed. The blue area is Upper San Leandro Reservoir and the pink just above that is Indian Valley, which would be another enhancement of the District's watershed lands. As in the northern area, the southern area could have an enhancement of the trail system, again the yellow here the existing trails in and around Buckhorn and Upper San Leandro, and the white could be the additional trails that are added.

And finally, just briefly talking about the environmental effects that relate to projects particularly such as a Buckhorn reservoir, since that is a project of public focus right at this time, the primary long-term environmental effect is creating an artificial lake in an area where a lake doesn't exist today. Our environmental consultants have found that there are no endangered species on this watershed. This is a map of Buckhorn, and I'll point out some of the other aspects of the project which have short-term environmental effects. The blue line starting from the top of the map and extending down to the reservoir is the pipeline that would have to be constructed through the Town of Moraga. There is also a pumping plant up near St. Mary's College at the top of the map. These would have short-term environmental effects of constructing pipelines and streets and the traffic associated with it.

Most of the construction traffic going into the Buckhorn site would come up from the south through Castro Valley, coming from the Livermore Valley over 580 and then up Redwood Road. Another part of the Buckhorn project would be the relocation of about 26 PG&E towers, which cross the site and would have to be relocated around the reservoir.

And finally, just a quick look at some of the capital costs associated with the water supply management program. Water banking, or the construction of a reservoir, is about \$152 million; watershed enhancement, if we're looking at purchasing about 3,500 acres of watershed land would cost about \$20 million; the water treatment improvement program in progress is

a \$35 million project; and improvements in the Delta, both maintaining and upgrading the levees as well as looking at the improvements in reinforcing levees and possibly improving the supports under some of the aqueducts are estimated at \$10 million. This \$217 million program would have an effect on a typical water bill of an increase of about 2½% over the life of the bond debt service, which is shown on the right-hand column. For comparison there is some on-going capital programs shown here. The distribution system improvements over the next five years is about \$130 million and the building modernization program of the District, including its new building in downtown Oakland, as well as new service centers and other improvements is estimated at about \$70 million. So this overall capital improvement program at about \$417 million would have an effect of only less than a 5% increase in a typical residential water bill over a 25-year period of the bond debt service. That's all I have.

GILBERT: Thank you very much Mr. Kolm. I'll try and be brief, President Skaggs, because I realize the program is running on. I'd like to summarize the staff recommendations which were mentioned by Rich Kolm and are listed in the report. As he said, the District over the years has built a series of aqueducts and storage reservoirs that provide the system that we now use. But we haven't added to that system since 1963 with the construction of Camanche Reservoir, Briones Reservoir and the third aqueduct. During that period of time a number of things have happened. The frequency of droughts has increased, engineers used to plan on the droughts of the 30's as the basis for engineering new water

supply, but we've now had the droughts of the late 70's and the late 80's. The Delta islands almost lost our aqueducts as the picture showed, and the District began in 1980 a series of studies to try to address that problem. So with drought frequency increasing, with the islands becoming more vulnerable and growth rate at about 1% per year even though the per capita consumption is being reduced, due to efficiencies both by industry and by residences, we still face some serious water supply problems. What have we done about it?

Well, we've managed to contribute to improvement of Delta security by regular contributions to repairs of the levees in the area. We've constructed emergency diversion facilities in the Delta and in 1970 the Board contracted with the federal government for a water supply from the American River that Mr. Kolm described. But in order to use that supply we have to guarantee that the water we use will not be diverted at times of shortage on the American River. And while we expect that the current litigation will be favorable, we will not be able to use the water unless we can demonstrate that it can be taken only at flood times in the American River. That's really the way we operate the Mokelumne River system. We take surplus flows, bank the water for times of deficiency. The problem is to have enough in the bank to ride through the times of deficiency. We'd done many other things. East Bay M.U.D. led the efforts of state urban agencies in urban water conservation with the first statewide water conservation planning act. We have probably the best leak detection and correction record of a utility-- we're at half

the national average in leak detection, and we're moving ahead with wastewater reclamation including the Chevron project, which should be on line within a year or two.

As President Skaggs pointed out, the Citizens Committee which was formed in the early 1980's recommended we take no water from the Delta and that we limit out water supply planning to 240 million gallons per day and our water demand is increasing and is now in the range of 220 million gallons per day.

When the staff looked at the alternatives in the water supply management plan, it sorted out those that appeared to be most practical or feasible based on those that had been implemented in California or had the physical capability of being implemented and were financially sound. There are many other alternatives, many other combinations of alternatives and our preliminary recommendations may be revised depending on the outcome of this hearing and the written testimony that has been received. But I'd like to mention just a couple of the aspects of those alternatives.

We have achieved a good deal of water conservation at East Bay M.U.D., we've now reached the point where we will have landscape irrigation control ordinances in every one of the 20 cities we serve. The re-use programs are being accelerated in Alameda and hopefully in the San Ramon Valley. We have even begun to try to use Delta water to augment our present supply in a form of water marketing, because the pump-back option that Rich Kolm talked about is in fact a dry-year substitution of Delta water for Sierra water for the farmers in the Lower Mokelumne

watershed area. We have the rights now to do that. It is not a matter of acquiring additional rights, it's a matter of doing it on a long term basis and we're having stiff opposition from the Department of Fish and Game and others. We may get through that opposition in a crisis year, but it is unlikely we could get through it on a routine basis.

Other alternatives, including inter-ties and, most recently at a Board meeting on Tuesday, desalting, are ones that we should look at further. But their costs and the availability of water supply from those alternatives is questionable. The District has looked at alternate routes of bringing water into the service area, including the route that runs through the Livermore Valley, but its cost and its potential environmental impacts and concerns have caused it not to be given serious consideration in this version of the Plan.

[END OF SIDE 1, TAPE 1]

. . . terminal storage.

Let me point out just three of those and their potential collective effect. For instance, we could replace the aqueducts to achieve a single purpose security alternative for about \$265 million. We could use water from the Delta to meet dry year conditions that would be increasingly frequent, but the bottled water impact of Delta water use based on actual data in the Contra Costa Water District and in Southern California, would indicate an increased annual user cost of something like \$25 million, for an increased bottled water use from about 5% that's now enjoyed in the East Bay Area to about 50% to 60% that is the practice in the Contra Costa Water District. We could adopt the enhanced water conservation alternative at 12 million gallons of savings which is a significant savings; but the cost of that would be about \$250 million. Those three alternatives together, then, would cost about three times the cost of the alternatives that have been described, and what would be the advantage? We would avoid the impacts of flooding a valley in which the open space would remain. We would substitute visitor days of the type that now occur around Briones Reservoir for those visitor days that now occur at about one-third of the amount in the watershed of the Buckhorn reservoir. We could further, if we were to construct reservoirs, enhance the watershed lands to protect water quality and the amount of enhancement at 5,000 acres would result in a net water surface coverage of the Buckhorn site, for instance, of something like 2% of the total public land that's owned in the region.

The Delta water supply, for instance, would not limit growth. In fact, it would be an unlimited supply when compared with a more finite supply in any one of the three terminal reservoirs. The results of this more piecemeal approach, which may be attractive in some respects, are evidenced in Marin County where the water rates are double those of the East Bay area, where they have had serious water problems-- fortunately not this year because of the way rainfall patterns went-- but we would also have the public reception of continual pressure of this area being in a perennial shortage situation since we never would get very much ahead of the demand.

Finally, we want to emphasize and we've not talked very much about cost here, that these alternatives would result, as the reports say, in a cost allocation between existing and new users to assure that all new users, as they now do in the District, pay the entire cost of their service so that if anything there is a benefit to existing users from new users connected, with the highest charges of any utility that I'm aware of in this region. Delta security improvements need to proceed in any event. The storage priorities, and it's important that we look at storage as a whole, if the impacts of the Buckhorn project appear too severe, it's important that we look at the Los Vaqueros project in partnership, or perhaps Pinole. But, in any event, we're talking about reservoirs that are like the ones that are now enjoyed by the residents of the East Bay for both recreation and aesthetic qualities. We've described the environmental benefits of the watershed program. The District has a chance to catch up and

hopefully we can devise a series of alternatives out of this program -- not limited to one that will achieve that.

In the next few weeks, depending upon the Board's determination, we will be processing the comments that are received and the staff will then look at them and take a look at our recommendations to see if we would at that time revise them to reflect all of the information that we get. Thank you very much.

SKAGGS: Thank you Jerry. Two things: One, let me re-emphasize to you that what you have heard is a combination of two things. It's a combination of background material and a combination of our staff's recommendations, and I don't mean to make light of that because there are people who are professionals who are paid good money from the District to make recommendations to us, but it is not the Board's proposal or the Board's plan yet. Some members of the Board are vehemently opposed to some of the things that have been said, some are vehemently in support, and I think the fairest statement about the minds of most of us on most of the issues is that we're still in the learning and decision-making process.

One more thing before we start taking testimony. Our experience at the last big meeting was that some who were unfortunate enough to be at the bottom of the stack tired and left. I'm going to mark the cards off. Those of you who do that -- who leave -- we will let you know when the next hearing is and we will give you priority at that time in terms of speaking first if you're still willing to come back and talk to us; or in the alternative, please consider sending to us your comments in

writing if you're not able to stay until your turn comes tonight.

Our agenda says a ten minute break now. Was there some technical reason for that . . . for setting up anything? Is there any reason why we shouldn't proceed now and postpone the break for later?

GILBERT: Let's take it later. Let's go on.

SKAGGS: Ok. First of all then, Mayor Bill Dabel of Orinda, followed by Councilmember Connors of Moraga, followed by Peter Berck of the University of California. Would you kind of proceed towards the podium so that we don't have a lot of time lost between speakers. Mayor Dabel.

MAYOR DABEL: Good evening. I have a prepared speech. It's short, but I wanted to say that I lived through the construction of Briones Reservoir and after it was done I thought that was the greatest thing that happened. Orinda is enjoying the increase in wildlife, especially deer. You read often in the papers that the deer come over from the reservoirs and are eating everybody's garden. We have tremendous community spirit because of what you've done. I am from a fourth generation San Francisco family. That's not to brag, but I think my grandfathers and father and those of yours here in the audience did a lot to prepare for the space and utilities that I have to live in. I have children and they need space and utilities, and I don't think we should go into the "drawbridge syndrome thinking" when it comes to water.

In some countries of the world you have to wait years to get a telephone, or you can't get gas supply or you have rolling brown outs and generally those utility companies have done a

pretty good job in supplying what people need. We have transportation problems. I got here in ten minutes this evening from Orinda, but sometimes it takes 30 minutes and I think we're working on our transportation problems. You at East Bay M.U.D., your predecessor boards have done a very good job of supplying us with water. Nine out of ten years you have all the water we need. Once every 10 to 20 years we have a drought and you then have to go to rationing and we don't like rationing, especially when its not needed. You can take the sting out of the drought by building these terminal reservoirs. You also can take care of the-- have the terminal water here in case of earthquakes. So, I favor the construction of terminal reservoirs.

6
Most of the years you spill the water and let it go out to the ocean and you really have to put that into reservoirs for us and that's what our citizens want. I'm in the kitchen of city councils where we handle all the planning and police and street problems and you here are kind of in the kitchen of the water supply and you've got to take the heat and bite the bullet and construct the facilities we need to keep our water coming to us. Don't let the "stop everything club" or the "stop everything people" stop you from providing the water we need all the time.

At a town meeting held in Orinda held last Wednesday night, mainly to protest the way you charge us higher rates, but uh, I asked the people there to raise their hands and show me how they feel about the construction of Buckhorn and I had over 88% of the people in favor of the construction of the Buckhorn and that tells me a lot. I also, and mainly again because of the rate

thing, had literally hundreds of telephone calls saying what are you going to do about it and that was batting over 90%-95% of the people that commented said that the terminal facilities should have been built so there would not be so much rationing.

I'm a little bit biased. Yes, I'm a U.C. Berkeley civil engineer who majored in irrigation, and uh, but I'm also the Mayor and I'm listening to the people that are talking to me. And if I got one message loud and clear is that, come here tonight and say Buckhorn is needed, Buckhorn should be built and I added on -- it's not just Buckhorn. I think you ought to build all three of them because you ought to have the terminal facilities you need (AUDIENCE PARTICIPATION), but certainly you need to build the facilities. Thank you.

SKAGGS: Thank you very much. Uh, one thing we can do without tonight folks, and let me address both the hissing and the applause. We've got a tremendous number of people to get through tonight and we really do want to hear them. If you have supporters in the audience and you wish to ask them to stand or raise their hands to demonstrate support, please do so. But, please try to maintain a sense of decorum so that we can move along. We would appreciate that very much. Uh, Councilmember Conners.

COUNCIL MEMBER (SPEAKER #1): Ladies and gentlemen. I'm not Bill Conners. Bill Conners is very sick. We are fellow residents, the two of us here, and we're going to read a statement that he's made and I would like to after the statement that he's prepared is read, I would like to go through his comments on the EIR.

19 SPEAKER #2: I'm going to read this statement of Mr. Conners'. I might add that his statement doesn't necessarily reflect my view. I'm against Buckhorn for only one reason and that's safety. And personally, I'd rather have a dead lawn than a row boat in my yard. Now I'm going with Mr. Conners' statement. Can you hear me? (AUDIENCE PARTICIPATION) I'll pull the mike down.

29 I also have some generalized questions concerning this analysis. He's speaking of the EIR. Why is Moraga being singled out as a recipient of yet another reservoir? We at least thought when San Leandro was built that that would be the finish, but no, East Bay M.U.D. seems destined to eventually give our town island status. While we were on the subject of reservoirs in close proximity to Moraga, let me mention the climatic effect that San Leandro caused. Since its construction we experienced much more fog in our town than previously. During the past few years the reservoir has been dry or very low and I, myself, have noticed the decline in fog activity. I like the sun, have a heart and study this issue closely please. With respect to geological and hydrological findings, they are deplorably simplistic and understated. 21 I strongly urge you to watch the video tape of the presentation of Dave Rogers, of Rogers Pacific, which I plan on sending you shortly. This firm was hired by the town of Moraga to act as a star witness in trial defense of our Measure "A" which was subsequently upheld by state and federal courts. Mr. Rogers is an expert in geology, land formation and watershed in the LaMorinda area and did his doctoral thesis on the Buckhorn region. 29 I must object to the archeological study allegedly conducted in this region.

From speaking to people who were interviewed, the principal methodology employed seems to have been to rely upon amateur spelunker and historical buffs in the area to make a determination of potential impacts. I am sure East Bay M.U.D. had no intention of spending their money on this aspect of the problem in quite this way. I object strenuously to the relatively short periods of time this entire review process is being condensed into. The fact that this is not the first draft presented to the Board, yet it was deliberately withheld from the public and press and the document is self-serving; glossing over issues such as endangered species, earthquakes, slide management and so on. The most hated word in the English language in Moraga, "mitigate" runs rampant through the document. Yet, we know from bitter experience the technical limitations placed on engineering sciences to truly correct deficiencies. You might, for example, relocate the poor from the ghetto to government subsidized housing, but that does not mean they're going to like it.

SPEAKER #1: Sir, I must apologize for a mistake. It's John Connors, not Bill Connors.

SKAGGS: I was wondering if were speaking of the same person. Sir, let me. Uh, are you prepared to hold your comments to three minutes, or to the alternative, you can drop to the end of the agenda, in fairness to everybody here?

SPEAKER #1: No, these are not my comments, now; these are Connor's specific comments on the EIR.

SKAGGS: My ruling before as to allowing public officials to

go first was due to their pressing schedule and their surrogates don't have that problem. How long do you expect to be sir?

SPEAKER #1: Well, I can advise Mr. Connors to respond to this in writing, would be a simple solution.

SKAGGS: It would be most helpful.

SPEAKER #1: If you prefer it we'll do it that way.

SKAGGS: These are comments on the EIR itself?

SPEAKER #1: Directly on the EIR, they're such things as the night use of schools and things like that. There are specific details like that.

SKAGGS: Do you feel it would take quite a while to put it orally?

SPEAKER #1: I would rather not do it to be honest with you. It's a very difficult thing for me

SKAGGS: It will get equal or perhaps better attention coming in in written form. It's easier to read.

SPEAKER #1: If I have to I'll help him write it. Thank you very much.

SKAGGS: Ok. We're sorry to hear he's ill and thank you for your cooperation sir. Mr. Berck, and since I've now been suckered into allowing letters to be read into the record, there is one from Supervisor Perata which can follow Mr. Berck and then hopefully we'll get on to the rest of it. Sir.

PETER BERCK: I'm Peter Berck and I'm a Professor of Agricultural Economics at the University of California at Berkeley.

SKAGGS: Are you able to work in three minutes sir?

BERCK: I'm going to work in three minutes sir.

SKAGGS: I appreciate that very much and if anybody wants longer let me know when you get up there and I'll try to be somewhat flexible. I don't believe in absolute minimums, but we're going to try to move it along. Thank you Professor.

BERCK: As a result, I'll limit my comments to the economic aspects of the EIR, distinctly less enticing than those of collapsing dams and the like.

First, there are many alternative stated in this EIR. The costs of these various alternatives are in no way comparable. For instance, a terminal reservoir with a capacity to provide about 80 MGD is not really very comparable to building a new pipeline that will provide you with 325 MGD. There would be no way to chose between the two of those. They don't do the same thing. The stated cost for the alternatives do not include the operating costs or the operating benefits. For instance, if one builds a reservoir it certainly has O&M costs as anyone who has been to any of the B.O.R. recent meetings knows full well. The can be quite significant and could change ones mind about what was a preferred alternative.

Second, for benefits. If one replaced a very large number of toilets, one would presumably not have to build a very large number of sewers. This is a benefit. This belongs in the EIR and it is not there.

Third, costs and benefits happening a different times need to be discounted. Nowhere in this document is discount rate ever discussed. This is critical when one is considering avoiding a potential outage of water 80 years in the future from a dam built today.

10 Fourth, the alternative to develop additional supply should include the purchase or exchange of water rights. There are people on this river system senior to the Board and it may well be possible to trade rights with them and to save some or all of the size needed for a dam.

10 Fifth, something like utilizing a Hetch Hetchy inter-tie with only dry-year rights bought on the Tuolumne should be considered. There is a report by the Assembly Office of Research which gives some figures for what water rights on the Tuolumne ought to be worth and the numbers are really quite small. Even if one considers only consumptive use, something like \$70 per acre foot per year, is what agriculture makes on the margin from those water rights.

10 Lastly, a reasonable set of alternative must include some collection of conservation, possibly a project, possibly a terminal reservoir, but the collection now given I think gives no choices whatsoever to the Board. I do not find them comparable and I think that all of these alternatives are likely to be more damaging to the District's rate payers and the environment than is necessary. Two minutes, fifty-one seconds.

SKAGGS: Thank you for helping us. Uh, Mr. Valle-Riestra followed by Mr. Vandeman, followed by Ms. Selfridge.

CHRIS VALLE-RIESTRA: Thank you, my name is Chris Valle-Riestra, I'm associated with the San Francisco Bay Chapter of the Sierra club.

SKAGGS: You need to speak into the mike Chris, there're problems with-- say testing. . .

VALLE-RIESTRA: I'm associated with the San Francisco. . .

SKAGGS: I'm not sure whether its you or the mike, but try to speak right into it and as loudly as you can.

VALLE-RIESTRA: I have been handed a letter from Alameda County Supervisor Don Perata, which is addressed to the East Bay M.U.D. Board of Directors and I would like to read this brief letter into the record.

"Dear Board Members: This letter is to express my strong support for a water supply management program that emphasizes water conservation, water reclamation and water marketing. I believe that before serious consideration is given to such expensive and environmentally damaging projects such as Buckhorn reservoir, every reasonable alternative must be addressed and exhausted. I do not believe that this has been done to date. The issue of water supply management is a difficult one made ever more imperative by the present water shortage because the decisions made on this issue will affect us all for into the future. My hope is that concerned individuals, groups and elected officials can discuss it in an open and constructive manner. This discussion must particularly include future population growth in the East Bay and the financial impact of water projects on the public. Thank you. Sincerely, Don Perata, Alameda County Board of Supervisors."

I'd like to add some brief comments of my own at this time, if that's permitted.

SKAGGS: I think you're kind of circumventing all of this. Your card came in last so I think in fairness to those who came

in first that I should not let you into the--

VALLE-RIESTRA: Very well then, put me back into the hopper.

SKAGGS: I'll put you back into the hopper Chris. It's difficult to be fair on all of this. Mr. Vandeman, followed by Ms. Selfridge, followed by Mr. Fuller.

SKAGGS: Are you able to stay short sir?

MIKE VANDEMAN: I'll try, but I don't have a watch so if you could help me. Basically, I'd like to support Councilwoman Burke's statement that I believe that the alternative chosen should be conservation. Uhm, and I didn't see that in there as a feasible alternative. I looked at your documents and I didn't feel a lot of trust in you. Let's say I wouldn't buy a used car from you. (AUDIENCE PARTICIPATION) If I were into buying cars. Luckily, in high school we were given a course on propaganda and I noticed there are some Boy Scouts represented here, they might listen. The two reasons why I felt a lack of trust was first of all, the very inflammatory language that you use, for example: severe rationing. You call severe rationing what I call my lifestyle. Or another one was intense water conservation measures. I don't know what is intense about water conservation. It feels good to me.

Second, I see very little emphasis on conservation. You say in one of your papers, ". . . since beginning its pioneer efforts in the early 70's East Bay M.U.D. has had a pro-active water conservation program leading the nation in water conservation education and in state legislation." I haven't seen that. And, I see very little specifics from you and I'm going to give some specifics. A good contrast to your organization is PG&E. I read a

very good book on PG&E on the story of how they came into conservation and didn't believe in it at first and found out that it saved them from building enormous numbers of plants. So, I'm for education --in your language, severe education and intense education. (AUDIENCE PARTICIPATION)

Since the 1976 drought I learned to take a one-minute shower. A one-minute shower doesn't last one minute. It uses one minute worth of water. You get wet, you turn the water off, you wash and then you rinse off. That's something I think you should push. Waterless toilets, I'd like to be able to get one. I think toilets waste an awful lot of water. Waterless gardening. I use a lot of native plants. Most native plants don't need water. They look great dry or whatever. I don't think we should have golf courses. I know you live on them, I guess. (AUDIENCE PARTICIPATION) That's where you cut the grass so short that it can hardly survive unless you give it a lot of water and drip irrigation systems are great also. You just turn them on and walk away and you it takes very little effort. And car washing I think is useless, except possibly the window. So, that's easy for me to say since I don't own one, but. . . Thank you.

(APPLAUSE)

SKAGGS: This gives the lie to the commonly held belief that everybody who lives east of the hills is a water waster. Mr. Vandeman is from San Ramon. Ms. Selfridge, followed by Mr. Fuller, followed by Mr. Fullerton.

LAURA SELFRIDGE: Good evening. That's a tough act to follow. Good evening President Skaggs and members of the Board.

My name is Laura Selfridge and I'm a part of Buckhorn Canyon Preservation Council. I intend to keep my comments brief to allow others to address their concerns regarding this EIR. But I do want to enlighten you about our group, B.C.P.C. The group was formed last Spring when Sierra Club hike leaders learned of a plan for a reservoir in the Buckhorn and Kaiser Creek drainage. B.C.P.C.'s goal is to oppose this reservoir and the supply management plan. We applaud East Bay M.U.D.'s courage to allow public hikes in this East Bay M.U.D. watershed. All of those who have been on our hikes and been led into this area have marveled at its beauty. I could wax poetically about this area, but I have chosen instead to quote a document's passage.

22 "These lands ranging from an elevation of 460 to 2,000 ft. at the crest of Rocky Ridge are the most rugged and ecologically and the most diverse of the District's holdings. Wildlife is varied and plentiful and vegetation ranges from second growth redwood in the canyon area to chemise and chapparell on the western slopes of Rocky Ridge." The document I quote from is the 1970 East Bay M.U.D. publication "Land Use Master Plan." Much is to be lost if this area is flooded.

This issue has been very easy to organize around. Grass root support is plentiful. Directors, listen to your constituents and remove Buckhorn Reservoir from your water supply plan. Thank you for your time.

SKAGGS: Thank you Ms. Selfridge. Tom Fuller, followed by Dave Fullerton, followed by Mr. Delfino.

TOM FULLER: All right, first let me state that I'm absolutely

opposed to the construction of a terminal reservoir in Buckhorn Canyon. Not only is a new reservoir unnecessary, but I think I have a slightly different view of what life will be like in the year 2020 than the one that has been presented by the staff. I grant you that we will be able to squeeze a few more years of unrestrained water use, but in 10 or 20 or 30 years from today, after growth has gone unabated, after the District's boundaries have expanded once again and after demand for water has soared, Jerome Gilbert and his band of engineers will be gone and you and I will be here once again trying to reconcile uncontrollable growth with a very limited water supply. The alternative is to face the fact that our water supply is very limited and to look at the other options available, such as water marketing, reclamation and conservation.

The State of California has over 1,000 reservoirs. Building one more is not going to solve our problems, but this one will destroy one of the few open areas in the Bay Area. Thank you.

SKAGGS: Thank you Mr. Fuller. Mr. Fullerton. (AUDIENCE PARTICIPATION) Most of us are managing to restrain ourselves and I would appreciate the cooperation of the rest of you. Mr. Fullerton and Mr. Delfino. David you're representing the Sierra Club and the principal speaker for it this evening.

DAVID FULLERTON: That's right.

SKAGGS: How's the time constraint fit for you.

FULLERTON: That would be a little bit constraining. Can I go a little bit over three minutes?

SKAGGS: You may and I appreciate your cooperation. As the

audience has probably gathered, the Sierra Club has been working on this and is probably the foremost advocate for a position different than staff's and for that reason I want to extend to their principal speaker a little more time so that he can make his presentation adequate. So Mr. Fullerton.

29 FULLERTON: Thank you, I appreciate that. I am Chair of the Sierra Club Bay Chapter Water Committee. Members of the Board. I have spoken to you on many occasions and usually I have opposed the majority view on the Board. But you whether you agree with me about Buckhorn reservoir or not, you and I and everyone in the audience ought to agree on one thing, at least. That this EIR is an assault. An assault on the concept that planning should proceed from a comparison and viable alternatives and their impacts. East Bay M.U.D.'s staff clearly started from the assumption that Buckhorn Reservoir is their choice and has worked backwards from that point, systematically cooking the numbers, belittling the alternatives and minimizing the problems with their own project. When and if the EIR is done correctly, some of you might still prefer Buckhorn Reservoir and I can respect that. People can disagree about issues without either side being somehow wicked. We should all, however, resist the kind of manipulation and contorted arguments that we see in this EIR. It is an insult to us all and in particular, it is an attempt to make the Board little more than a rubber stamp for staff policy.

25 Let me start with the EIR's discussion of cumulative impacts. Buckhorn reservoir is not an isolated project. If events work

out to East Bay M.U.D.'s satisfaction, Buckhorn will very likely be coupled with (1) the American River diversion, which could provide enough water for almost a million new people; (2) a new aqueduct into the district to carry the American River water, including an earthquake proof aqueduct to cross the Delta; and (3) a massive new reservoir in addition to Buckhorn. Well, where is the discussion of environmental, financial and growth impacts of all these projects? There is none. East Bay M.U.D.'s staff is trying to sell its projects one at a time, hoping that we will forget that Buckhorn is but one of many probable capital projects. Ignoring these cumulative impacts is a no-no according to CEQUA. The same sleight of hand is used to mask the growth inducing impacts of East Bay M.U.D.'s program. 25

The EIR says that Buckhorn would merely eliminate an obstacle to growth, but this is clearly false. Not only have the cumulative impacts of the entire East Bay M.U.D. program been ignored, that's the American River diversion, the new aqueduct and the additional storage, but there are some more subtle deceptions as well.

First of all, current East Bay M.U.D. policy is that the District should not undergo shortages greater than 39%. East Bay M.U.D. staff has unilaterally reduced that figure to 25% in their preferred options. That means a much larger reservoir than needed for District policy and the ability to serve more customers. Conservation gains have been almost entirely discounted. Up to a year ago, East Bay M.U.D. thought that additional conservation measures would save about 20 million gallons a day by the 3 4

year 2020. Now, they have reduced that figure to a miniscule 4 million gallons a day. That's a drop of 80% in just one year. This is not just a brazen attempt to frighten you with inflated demand projections, it also serves to mask the true amount of excess water that Buckhorn will produce.

12 Thirdly, despite all the scare stories about how Buckhorn is needed for security, it is widely that a new earthquake proof aqueduct will be built across the Delta fairly soon. As that point, Buckhorn will no longer be required for security and all its storage will go to servicing new growth.

24 From the beginning, Buckhorn will provide far more water than is needed for planned growth within the district, and after the new additions are put in the growth inducing impacts will be enormous.

10 Now let me get to what really bothers me about the EIR. No attempt has been made to come up with an alternative to the staff's preferred approach. The first I read through the section on alternatives I had to laugh, because the section was so obviously biased. It isn't a discussion of alternatives at all, but a militant defense of Buckhorn Reservoir. A viable alternative will involve many elements: conservation, water marketing, 27 inter-ties, perhaps an earthquake proof aqueduct, perhaps routine pumping to Camanche Reservoir in drought years. But instead of creating a workable plan using a combination of these methods, the EIR attacks the alternative elements one at a time.

Conservation and regional cooperation were rejected because individually they don't solve all the problems. A Delta backup

to be used once or twice in a lifetime is rejected essentially out of hand. No real attempt is made to see how such a backup could be made to work. Some important elements are almost completely ignored. Such as, building an earth-proof aqueduct, water marketing and pumping water to Camanche. Did staff really think we wouldn't notice the dice were loaded to come up Buckhorn every roll?

The failure to look at the cumulative and growth inducing impacts, the failure to examine any alternative program -- these are not just violations of CEQUA. They are insult both the public and to yourselves. After all, you are the ones who must decide the future of the District, not your staff. You have the right and the duty to insist that you be presented with all the available options and their impact before you come to any decision. This EIR should be sent right back to the drawing board for extensive repairs, and if staff refuses to present you with options, you should find competent consultants who will. Thank you.

SKAGGS: Thank you Mr. Fullerton. Mr. Delfino. Mr. Buckingham. Mr. Rose, in that order. Mr. Delfino?

FRANK DELFINO: Does that sound like it's going to be all right? Ok. I'm Frank Delfino and I have several comments to make both on the technical report and on the EIR.

SPEAKER: Speak into the microphone, will you, so we can hear you?

DELFINO: I'll lower it down a little more. On figure 3-28 shows all new connections in all areas of the District who

will use more water than existing use. That's existing users. On page A2 an incentive plan is mentioned for low-flow, low-use household plumbing and low water use plantings. Why can't the incentive program be made a condition for connection of new units. If existing householders can reduce water use with their old plumbing, certainly it would not be too much to expect new plumbing to use less water rather than more water.

11 The program of activated carbon and ozone water treatment sounds real good. On page V2 a comment is made that a Delta treatment plant would cost \$370 million. No mention is made about capacity, final water quality comparisons or any specific information. Since American River water may never be diverted from Folsom South Canal -- everybody seems to think that it may be and it may never be -- it may be that the water will come out of the Delta if that's where you can get it. You presently have the right to get it there. I would like to recommend that the District study the following alternative. Develop the design for a 10 to 20 million gallon per day activated carbon ozone treatment facility, which would be used to clean up the water for blending purposes in your Mokelumne water. The plant could operate at maximum through put in in Winter and Spring when water quality in the Delta is reasonable and in Summer, when the quality of water goes down, it can be reduced to some lower level accordingly.

The plant design would be such that as demand increases, which there seems to be a standard procedure with the planning commissions that if we need more water we need more people in

order to stay where we are, as this demand increases that incremental additional units of ten to twenty million gallons can be added. This approach would avoid the large capital expenditures up front that are presently proposed in the technical report.

Now, comments on the EIR. Don't put the burden on mitigation --that's a bad word, I know --on the California Department of Fish and Game or on U.S. Fish and Wildlife, since the consultants seem to say "well you have to go and consult with those people." The burden of performance is on East Bay M.U.D. All riparian and stream mitigation has to be in place -- that's in place -- and operating effectively before any construction beings. There have been too many wild promises on mitigation which have not worked and wildlife and plants have been lost to us forever. It could take 10 to 20 years to find out if mitigation is operating effectively and that makes it a little difficult to take care of the water, the present planned water use, that is talked about.

Finally, in the State Senate Concurrent Resolution 28, passed in 1983, the legislature recognized the importance of wetlands, which riparian is a form of wetland, with the following: The intent to preserve, protect, restore and enhance California's wetlands and the multiple resources which depend on them. This means do not bury them under land fill or under water, because that loses them.

Finally, these comments an others will be sent to you in writing. Thank you.

SKAGGS: Mr. Buckingham, followed by Mr. Rose, followed by Mr. Hogan.

TOM BUCKINGHAM: Can you people hear me? I'm Mr. Buckingham and I'm obviously not very used to doing this, so I appreciate your help on time, Mr. Skaggs, and the voting public; I have lots of comments I'll try to hold these on the EIR specifically to the last. I want to begin by saying who I am. I'm a resident that lives within one kilometer of San Leandro Reservoir and within two kilometers of the proposed Buckhorn reservoir. My wife and I have lived there for 20 years and we're quite familiar with what happens there and, I believe, some of our concerns are the same concerns as yours. Specifically, earthquake safety. Its fairly obvious to us that earthquake safety caused you build another dam at Upper San Leandro. There are two dams at Upper San Leandro. I believe the reason for this is there is concern over dam failure. There was failure of a similar dam in Idaho. There was almost the failure of a dam in an earthquake in the Los Angeles suburb that everybody's familiar with and uh, I wish a drink of water --this is tough.

At any rate, for the past 20 years I've been concerned. Before they built San Leandro Reservoir, it was a nice earthquake free areas as far as I was concerned. In 1977 they built the second dam and we had a lot of earthquakes shortly after that. At least I thought that was the case. And then I heard that you people were going to build a dam and I became very concerned about earthquake safety of an aqueduct, specifically the aqueduct that goes up Camino Pablo. It's not mentioned in the EIR and I think it should be.

Another concern, is just the size of Buckhorn. It's 145 thousand acre feet. An acre foot of water weighs 1,400 tons. Simple arithmetic says 200 megatons of water less than a mile from all the houses in Sanders Ranch and above these houses, there is no mention of this in the EIR. There's no mention of reservoir induced seismicity. That's earthquakes caused by deep reservoirs. Buckhorn is the deepest reservoir you people have ever had. It should be considered, I think, in the EIR.

My first approach was to get hold of the EIR and I read it and became a little more confused, actually. Am I confusing you people with this mike? Should I be closer or farther from it? At any rate, earthquake safety, reservoir induced seismicity, I think, should be addressed. As a matter of fact, I'm sure you people know about this because you had a seismograph at San Pablo Dam, so East Bay M.U.D. must be aware of this particular problem. Wave overflow is mentioned in the EIR, but it doesn't say anything about the Brown Ranch Road, and that's a logical place for wave overflow from a landslide-induced sewerage in Buckhorn reservoir. It's not mentioned in the EIR that it might overflow and come down that way. It should be addressed I think. The EIR says there's a three-day food supply for the workers in case there's an earthquake, so they're obviously concerned. The food and water supply is there in case there's an earthquake, but no concern for the residents of the town of Moraga. And it's earthquake safety for them too, just like earthquake safety on the aqueduct out in the Delta.

Well, this sent me scurrying to the University of California.

I was so confused with the EIR, I went and saw people in Dr. Boalt's office and they came up with a report which I would like to share with you people. It's a computer print out sort of thing, a lot of pages of data, but they two interesting things. They looked at earthquakes in ten year periods. The ten years before the second U.S.L. Dam was built and the ten years immediately after U.S.L. was built. And lo and behold, this report from 1967 to 1976 shows six events. You probably can't see it, but the locations are exact on this. It's just incredible how accurate the data is. Now they did another report from 1977 to 1987. Would you believe it shows 21 events are plotted on this report, and incidentally if you can see this in the camera,--I'm very nervous-- but, the blue is the existing reservoirs, the yellow is Buckhorn and the biggest earthquakes reported are just south of upper San Leandro, U.S.L. In the same instance when I got this information from Dr. Boalt's laboratory, I looked in the area of the Delta. There were hardly any, and I think virtually no earthquakes, in the area of your aqueduct. And so, earthquake safety? Who should be concerned? Me or you? You know, I'm very concerned about it.

[END OF SIDE TWO, TAPE ONE]

PAGE 51 WAS INADVERTENTLY OMITTED AS A CONTINUING PAGE.
CONSEQUENTLY THE NEXT TAPE ACTUALLY BEGINS WITH PAGE 52.
THERE IS NO MATERIAL MISSING.

[TAPE TWO, SIDE ONE]

BUCKINGHAM: . . . I have two other points and if I can find my notes I'll get back to them. The safety of the elderly, I think should be addressed. The EIR does a very good job of talking about schools and libraries. Mr. Connors had a comment that I didn't get to that had to do with the fact that the libraries are going to be opened longer and there are some things like that happening that aren't properly addressed in the EIR, but that's his problem and not mine. I think for these elderly people, though, it's a serious disruption. They live on Moraga Road and right across the street are about a dozen doctor's offices. They're always walking across the street. They'll have to cross a seven-foot diameter aqueduct when it's under construction, and what may be a temporary disruption for us may be rest of their lives for those people. So, it should be in the EIR. How are we going to handle that?

Archeological resources is another concern. The archeological report that's in the EIR says there are two sites within close proximity to each other. Brother Dennis Goodman, at St. Mary's, when I talked to him about this, said yes, there's a site down which is going to be right by the Buckhorn dam that has a lot of Indian grinding stones in it and in close proximity to that there is some sort of a petroglyph, and I said, well gee, three miles up the canyon there's another one. So, I don't understand this, two sites only in close proximity. There's a lot of sites over at St. Mary's College itself. There's known Indian bones, there's known Indian arrowheads and at this point I became

very concerned about your pump site. But, I have to congratulate you. I learned today that the pump site will in fact be built on land that is presently owned by St. Mary's College and is in fact a condemned sewage disposal plant. Is that not correct? I was surprised at that. But, in a way that's clever because that solves the problem of not having to worry about digging up any bones when you're in the process of building this reservoir, because they've already dug that one up and all you'll find is an old sewage plant when you put in your pumping plant. Thank you very much.

SKAGGS: Thank you. Mr. Rose, followed by . . .

WARREN: Mr. Chairman, before we proceed, we have over 70 remaining cards. Divide that by three minutes, you're going to be here past midnight and the garage closes at midnight. I am greatly concerned that not happen tonight what happened when we had our meeting that everyone gets an opportunity to speak, and I would appreciate it if at least at the beginning of the speakers that we do limit them to three minutes or we're never going to hear everybody that wants to speak.

SKAGGS: Mr. Rose, followed by Mr. Hogan, followed by Mr. Conly.

GERALD ROSE: My name is Jerry Rose. I'm the President of of the Merriwood Forest Park Homeowners Association. When my members turn the tap on their faucets they expect to see clear mountain water come out. That's what we pay for. So, I'm not going to be cute, I'm not going to be clever. Let's talk the facts. The last supply of mountain water is the American River. We want that water. The only way can get that water is if we

have a place to store that water. Otherwise, we don't have it. The only alternative to that water is to go to the Delta and I'm going to be frank with you, I wouldn't want my people to eat, to have food or drink that junk that flows down the Delta area. Let me give you an example, the Contra Costa Grand Jury of 1984 told the C.C.W.D.-- they ordered them to take several steps to improve the quality of its water, and Martinez, Antioch and Pittsburg filed briefs with the court saying the following, and I quote: "Delta water has six times more total dissolved solids than the American River. Pesticide use in the San Joaquin basin is 220 times greater than in the American River basins. Projections show that by the year 2000 there will be 511 municipal and industrial discharge points in the Delta and only five on the American River. This is the junk that is flowing down there. Your own report says that, let me give you an example of it. It says here on page 12 that Delta quality would be degraded even further due to salt water intrusion, in addition to the continuing flows or agricultural drainage.

Now I don't have to tell you that the only thing that keeps that Bay back at all is the power of the Sacramento River. It's going down right now. We don't have the water to keep the salt water out. The salt water will come in and I hope that everybody in the audience who's on a salt free diet, or everybody in this audience who has somebody in the hospital who really is very dangerously involved with sodium will remember that the water

that comes out of there is loaded with the stuff. They can barely, barely drink it, and I'm not kidding. Let me give you an example. Salt level is nearing limit in Contra Costa's water. That was back in 1985 and they haven't improved it since. Selenium, which I think if you heard of Kesterson, you will remember that its an agricultural disaster down there from water that was used for agriculture -- selenium blamed for decline of Bay and Delta fisheries. What do you think is flowing down through that Sacramento River, from a thousand farms? And a thousand times a thousand toilets? And a hundred times a hundred industrial plants? Where do you think they dump that? They dump it in the water that we will have the opportunity to drink if we can't get any more mountain water. That's the stuff. They are desperate for our water. We have never heard from them saying, well we'd like to sell you our good stuff. No way. That's a last resort. This is not cute. You get can laughs from an audience. This is not funny. This is the last big chance we have to reserve for your children and my children a decent supply of good water. There's an old adage in the west that water is life. Well I've got news for you, in the modern day west, water can be death, and I'm not going to give you my own opinion. This, Mr. Gilbert, is your work with the C.C.W.D, Contra Costa Water District. And the final things on this-- listen to some of the stuff you will be drinking if we can't find a place to put the mountain water. You will have mineralization. Want to buy a water softner for your water? You know what hard water does to your clothing, to your pipes, to every kind of mechanical stuff?

That's great. Sodium. High levels of sodium are often associated with mineralized water.

They give you a full paragraph which I won't give you here, but to be honest with you, the American Heart Association says its a major killer. It'll kill some of you. Synthetic organic compounds. This means all of the alphabet soup of pesticides, which presently is floating around in our Delta area. What do you think they spray on those plants? That just doesn't go into the ground, it goes into the ground to the ground water to the river. It goes into your food. It goes into your drinking supplies and its floating down there now. There's one thing called tri-- I won't go into it. There's 15 different names for these things. Taste and odor. Now, you know we've all been spoiled. I've traveled around the United States, I'm sure you have, you know that most people in the United States use bottled water and they use it for good reason. They use it in Contra Costa for good reason. The water stinks. Go down to San Diego sometime. Go along the Mississippi River. You can talk about the river, you can see the river. It's a nice beautiful brown.

SKAGGS: Are you close to winding up?

ROSE: I'm very close to finishing right now. Asbestos is another one, microbiological contaminants and finally, last of all industrial and consumer costs. If we can't get mountain water you're going to switch to bottled water. Marvelous. You're going to pay twice for the amount of stuff that you drink. And, I'm going to tell you one other thing, you are going to find

that your life is going to become far more complicated. We are lucky, we have been spoiled. Our water is clear, it's pure. All I'm saying in this-- this is my last thought on this. The people who I represent in our association, they want this to continue. I think you've done a fine job and I really mean it. We've got a growth area here. We've got declining water supplies. We've got to face realities. The reality is, we have got to keep the quality of our water up in the face of drought and there's no guarantee that this isn't the beginning and not the end of a drought. In the face of increase in people coming here, and you can't close the door and say well I've got mine folks, I'm not going to let you build because I don't like it. We're also going to have to face the fact that there's competition for water everywhere. I think this is the only way we should go and I thoroughly stand behind the staff and the report.

SKAGGS: Thank you sir. Mr. Hogan, followed by Mr. Conly, followed by Ms. Nadel.

JOSEPH HOGAN: Good evening. I'm Joseph Hogan. I'm a resident of Moraga and, incidentally, I'm another person from east of the hills who conserves water successfully. My bill came yesterday and we had averaged 80 gallons per day for the past two months. (APPLAUSE) I oppose building the Buckhorn reservoir for two primary reasons. The first is that the dam will flood and forever destroy almost two square miles of the unspoiled wild canyon land in the East Bay. I have hiked through the area and it is a beautiful wilderness. I would suggest that perhaps no member of the Board who would be able to explore that area should

vote to destroy it without having at least explored it personally.

The second reason that I oppose it is one that I believe any taxpayer and water rate payer should consider. It happens I have to be out of town on election day, June 7th, so I have just completed and sent in my absentee ballot. When you see the ballot, you'll find that there is an extraordinary series of bond issues on the ballot, most of which will probably be approved. If I counted correctly they add up to about \$6 billion. They are for such good purposes as transportation, veterans' benefits, wildlife and park land acquisition and housing. I think the burden of paying off these bonds for necessary projects will be very, very heavy without adding another \$200 million or more for a reservoir which is simply not necessary. I agree with the lead editorial in today's Oakland Tribune, which concluded that there are better alternatives. Better than building the proposed reservoir and I believe that with serious conservation, underlining serious, an absolute stop to any further annexation within or without the outside boundaries and a permanent system of graduated water rates, we can avoid this huge expenditure and save Buckhorn Canyon. Thank you.

SKAGGS: Thank you sir. Mr. Conly, followed by Ms. Nadel, followed by Ms. Burke, Patricia Burke.

LEONARD CONLY: Good evening. Can you hear me now? My name is Leonard Conly and I'm with the Nuclear Free Berkeley Committee. You might wonder why the Nuclear Free Berkeley Committee is here to talk about East Bay M.U.D. water supply management plan, but I think when I get through reading this

statement you'll understand some of the problems that have not been addressed in the environmental impact report.

In general, we find that neither the technical report nor the draft environmental impact report on the water supply management program have addressed the consequences of a catastrophic nuclear accident at the Rancho Seco nuclear power generating station, which is located 15 miles up-wind of the Pardee Reservoir and the Mokelumne watershed. The Chernobyl melt-down has demonstrated how severe and long-lasting these consequences can be. Given the correct weather conditions at the time of serious accident at Rancho Seco, it is quite possible that the Pardee Reservoir and the Mokelumne watershed could become seriously contaminated with long-lived radioactive isotopes such as cesium 137 and plutonium, which could render runoff from the water shed unusable for many years. Cesium, which is water soluble, is taken up by plants. When these plants are eaten by animals and humans the cesium is stored in muscle tissue, where it remains radioactive for many years. In other words, if you hunt deer in the Sierra you may not be able to do so if Rancho Seco lets go, and that's something for all of us to think about.

At the Chernobyl accident, over 200 deep water wells were drilled to supply Kiev. Russian scientists fear that radioactivity from Chernobyl would reach the Pripyat and Dnieper Rivers, the source of Kiev's water. Now, in 1980 the NRC initiated a new safety study which it designated as CRACK II. That stands for calculations of reactor accident consequences, which for the first time calculated a wide variety of possible accident consequences for each of the 80 sites in the United States where

atomic power plants are operating or were under construction. The worst case scenario postulated in the study is based on what the NRC calls a group one accident. One involving severe core damage, melting of uranium fuel, essential failure of all safety systems and a major breach of a reactor's containment, resulting in large release of radioactivity into the atmosphere. NRC staff has estimated that there is a 2% chance of such an accident occurring in the United States before the year 2000. Now keep in mind that Rancho Seco now has the worst operating record of any nuclear reactor currently operating in the United States. For Rancho Seco, the worst case scenario according to the NRC's own figures involve \$113 billion in property damage and 35,700 fatalities from radiation among the population located within 20 miles of the plant. Remember, anyhow, we fortunately don't live near Rancho Seco, but our water supply is located very close to Rancho Seco, and that is not addressed in this Environmental Impact Report at all.

Remember that even in the optimistic era of nuclear power, private insurance companies flatly refused to insure nuclear power plants. Congress responded by passing the Price Anderson Act, which provides for a maximum coverage of only \$500 million for a single accident at a nuclear power plant. Congress is currently considering raising this limit to \$7 billion. It follows then, that people and institutions such as East Bay M.U.D. holding property that might be damaged by a nuclear catastrophe at Rancho Seco are insured for less than one-half of 1% of their losses if this type of accident occurs.

Furthermore, in the event of radioactive contamination of the Pardee, it is possible for radioactive material to find its way into the Mokelumne aqueduct and contaminate the East Bay M.U.D. supply pipes and water treatment plants if prompt action is not taken.

In view of the above facts we suggest that there are three areas that need to be addressed in the water supply management program technical report and the final environmental impact report: (1) What emergency plans are to be followed by East Bay M.U.D. personnel at the time of an accident at Rancho Seco that might affect the reservoir? What procedures are in place that will ensure that water flow into the aqueducts will be cut off before they become contaminated? Are SMUD personnel required to notify East Bay M.U.D. staff during "abnormal events" that might result in a radiation release. For example, on December 26, 1985 when the staff at Rancho Seco lost computer control of the reactor and they were forced to operate valves manually to regain control of the reactor were East Bay staff alerted? Does East Bay M.U.D. monitor the water entering the aqueducts for radioactivity on a continuing basis? (2) How will East Bay M.U.D. replace its water supply if the Mokelumne watershed and the Pardee Reservoir are contaminated for a long period, perhaps years? Can 325 million gallons a day of water of equivalent quality be found anywhere else at an equivalent price? (3) In the event of such an accident, who will pay for these new water supplies? Does East Bay M.U.D. have financial reserves set aside to purchase new water sources if they can be found?

We have some recommendations: (1) until these issues are settled it would be imprudent for East Bay M.U.D. to invest capital to build reservoirs at Buckhorn or anywhere else. This capital may be needed to replace the Pardee in the event of a nuclear catastrophe. Since building a new reservoir is an attempt to prevent recurring water shortages connected with drought conditions, it would seem more prudent to focus on water conservation and reclamation recycling and improving efficiency of water use rather than using capital that may be desperately needed in the event of a loss at Pardee. (2)--

SKAGGS: Are you close to finishing sir?

CONLY: Yes, I've got about 30 seconds. (2) East Bay M.U.D. should rewrite the technical report and the EIR, taking into consideration not only the consequences of floods and earthquakes, but the effects of a nuclear catastrophe at Rancho Seco as well. We have one suggestion too. Since 20 million gallons of American River water is used at Rancho Seco each day and since a report just issued by SMUD indicated that they can buy electricity elsewhere for a lower price than it costs to produce it at Rancho Seco, we think that East Bay M.U.D. should ask SMUD to shut down the reactor until the drought is over. It doesn't make sense to waste that much water. We're talking about 20 million gallons a day and that's running at full power. We can't have our kids playing in the sprinklers this summer, because SMUD is using the water to run a reactor that they don't need. The clearest solution to this problem is the closure of the reactor. We urge the Board to express its support of Measure "B", the Rancho Seco

Voters' Rights Initiative, which has been placed on the June 7th ballot in Sacramento. If Measure "B" passes it will require the permanent closure of Rancho Seco. It will also mean the Board will not have to deal with this problem any further. Thank you very much.

SKAGGS: Thank you. Ms. Nadel, Patricia Burke, followed by John Burke.

NANCY NADEL: Good evening. Thank you for this opportunity to speak on the East Bay M.U.D. water supply management plan EIR. My name is Nancy Nadel. I am a director of the California Water Policy Group and I'm a trained geologist and engineering geoscientist and currently a practicing geophysicist. My remarks this evening will focus on three areas. Geological conditions at the Buckhorn site, conservation and the Mokelumne Aqueduct.

The EIR on page 53 describes the preferred location of the aqueduct tunnel at the proposed Buckhorn reservoir. The tunnel is shown as passing through a rock formation called the Claremont Formation. Other locations for the tunnel require crossing up to four geologic units and a fault. Good principles of site selection for such tunnels make a single geologic unit preferable. However, the selected Claremont unit is made of thin layers of chert and shale. Most Bay Area geology students, and I was one, are assigned the task of mapping the East Bay hills. In that process, while scratching our poison oak, we find the Claremont Formation appearing in steeply dipping beds with the shale being crumbly and weak. Although the dip of the beds at the tunnel site doesn't appear on the geologic map in the EIR, the map shows

the dip of those beds to the south of reservoir as 70 degrees. Geologic literature on the hills describes the Claremont Formation as having an incompetent shale member subject to creep an fracture by gravitational force alone, accentuated by the dip of the beds.

Basic geotechnical engineering literature describing site selection criteria for aqueduct tunnels, discourages locating in shales. Shales are often weak and may flow into the tunnel. Such risks are a serious omission from the EIR, which indicates more concern with building the reservoir than clearly evaluating relevant information. Choosing a costly and risky structural solution which may lead to even more costly problems, is not the conscionable way to eliminate drought shortages. Other, better alternatives exist. A combination of improved conservation efforts, reclamation and use of a Delta water blend for emergencies is better.

Conservation. On page 7-14 of the EIR there is a list of conclusions with respect to conservation. The fifth conclusion states that the perception of availability of adequate supplies of water is necessary in order to maintain a strong economy. It claims that aggressive conservation measures are not likely to have a positive effect on the economy. I wondered by more aggressive conservation measures weren't taken and whether concerns about economic growth were the reason. I'd like to dispel the myth and make a recommendation. I've spent substantial time studying earthquake prediction as well as economic influences on public education and regulations related to that. Despite

pressures from the business community against regulation, homes can now legally not be sold near geologic risk without the prospective buyer being informed about that risk. The Bay Area is well know for its seismic risk and home buyers are not being told about them. Such regulation has had no noticeable effect on Bay Area economic health. With that in mind, particularly in arid regions of the district, be informed of the periodic need to enforce drought measures. The recent publicity of Contra Costa County residents' frustration with endangering their costly landscaping can be largely attributed to East Bay M.U.D.'s wishy-washy position on conservation.

For years the District's line provided little public awareness of water as a limited resource. That negligence leads only to confusion, ignorance and a very weak commitment to conservation.

The Mokelumne Aqueduct. East Bay M.U.D.'s staff has recommended terminal storage to offset earthquake risk to the Mokelumne Aqueduct. They justify the size of the terminal storage needed by approximating a 13-month, worst-case aqueduct outage. At a recent presentation to a local association chapter of civil engineers, East Bay M.U.D. Engineer Richard Kolm said that the 13-month figure was the time needed for complete reconstruction of the aqueduct. When I asked Mr. Kolm about the time needed for temporary emergency construction, I was told about delays in the delivery of pipe of that size and about the difficulties of doing construction work from a barge. I acknowledged both those problems, but I still wasn't given an

answer for the time it would take for an emergency solution. I did run into a senior East Bay M.U.D. engineer in the BART station after that presentation, and he responded to my question. He estimated that there was a six-month temporary solution which could satisfy 40% of the District's demand. Although the train came before I got the opportunity to hear more of this engineer's temporary solution, I think the public and the District Directors should be given a more detailed picture of the possibilities in the EIR, so that they can better evaluate the real available supply and can make well informed recommendations and decisions.

It seems prudent to continue to study methods of building an aqueduct support structure that can survive a large earthquake. I'm not convinced that it will require an entirely new and huge additional pipeline to do that.

In conclusion, I will reiterate my major points. Don't accept costly and structurally shaky reservoir solutions when better alternatives exist for the District's drought risk problems. Intensify conservation measures and the adult public's awareness of their importance. There's no justification that such efforts will endanger the regional economic health. Urge staff to give you the full picture on the time need for emergency repairs to the Mokelumne Aqueduct before you evaluate whether you need a new large terminal reservoir and proceed with studying methods to strengthen the aqueduct against large seismic events. Thank you.

SKAGGS: Thank you Ms. Nadel. (APPLAUSE) Patricia Burke,

followed by John Burke, followed by Tom Hedges. Patricia Burke, right here.

PATRICIA BURKE: I'm Patricia Burke and my family has lived in Castro Valley for some 40 years. I come here as a private citizen. There are many in the audience here this evening who are interested in the question of Buckhorn, but we don't know anything about the nature of this audience, and I would like to ask how many of those in the audience this evening are opposed to the construction of the Buckhorn reservoir? Could you stand up? (APPLAUSE)

BURKE: They're all Sierra Club-- Thank you.

SKAGGS: That was a helpful summary.

BURKE: I'm obviously opposed to the construction of the Buckhorn reservoir. One of my biggest problems with it is that it will provide us with an illusion of growth in water supply. Obviously, storage is only a one-time stopgap as far as dealing with the kinds of problems that have been brought up here this evening, namely, the earthquake problem or the drought problem. But, if we have this illusion for policy purposes of growth in water supply, then this is easily going to lead to an increase in the number of households the overall demand for water. And what I see is that what we're going to be doing is spending hundreds of millions of dollars to get ourselves in just exactly the same fix we're in right this season. The time is going to come when we will have another dry period, but we will have more people needing water and we will again be having these

restrictions in spite of the fact that we spent all the money for this additional supply of water.

11 What is wrong with possibly once in 83 years having to use Delta water for a few months? We're told that with the reservoirs that we now have, that we cannot supply water, cannot supply mountain water, for the 13 months that it would take to repair the aqueducts if they should break. What's wrong with few months of Delta water? When we consider that what we're going to do is highly destructive of a very fine natural environment. What particularly bothers me about this is I think the whole problem is being approached in a bits and pieces fashion. It's not being taken in a larger context.

We have a drought this year and one might say that it is a warning from above. But, I don't think it's a warning that says we ought to build reservoirs. It's a warning that says that we should look at the overall problems of water supply, that is, what we have. The growth of demand for that water. And we find here in this discussion that there simply is seemingly no debate on the issue of growth per se. It is just assumed that demand is going to grow. We find, for instance, that the Board just assumes its passive role in the planning process. They have their district and they're obliged to provide water regardless of what the local planning agencies forced off on them. Why not take a more active role in what is done?

We find nothing at the moment really coming up about a permanent block rate structure that others here this evening have suggested. There's arguments to the effect that price does not

have an effect on quantity demanded. Well, in surplus water years, no. A modest block rate structure wouldn't probably affect demand at all, but what it would do is to send a message so those who are high water users would know that they are getting themselves into a situation where during dry years they would be squeezed very badly on their regular usage. They would either have to reduce drastically or pay a very high price for it. I should think that one thing that would be very good is that annually East Bay M.U.D. send out with their bills a description of what the drought year price rate structure would be, so that people would know and could design their water usage accordingly.

Finally, in other parts of the country, areas suffering water shortages have taken what we might call heroic measures and that is ways to recycle water to use recycled sewage. Let's face it use the solids for fertilizer and use the water for public landscaping. Why aren't we talking about these kinds of things? Oh, there's talk in this report about conservation measures, but they really strike me as a kind of token acknowledgment. They're there, but we're not really taking a grip on them and trying to work them in to a total program.

SKAGGS: Are you nearly finished ma'am?

BURKE: Yeah, ok. This is really all I had to say on this particular subject. I would like to say that I have some misgivings from newspapers reports that the staff has said that it would take some 13 months to repair the aqueduct and we find out that this would involve six months of design work under emergency

circumstances. We find that they could only use two shifts of workers, not three shifts seven days a week? Um, I have some real, real misgivings at this point about how the staff is approaching this problem and whether with regard to the aqueducts per se there is a real risk. Thank you.

SKAGGS: John Burke, followed by Tom Hedges followed by Susan Adams. Again, I ask you in fairness to those behind you to try and restrict yourself to three minutes.

JOHN BURKE: Well, as luck would have it both members of the 40-year Castro Valley family get to talk back to back. I would like to address a point of philosophical approach in this thing. One thing the drought has shown us is that the true cost of water is not entirely what it costs in dollars today to deliver water to you, it is what it costs to deliver during the drought and I'd like to emphasize another true cost of this. That is, the fact that pressure on open space is something that is going to continue growing just like demand on water is growing. We've been busily building a second Los Angeles in this area for the last 40 years, and God help us, it looks like we're going to succeed. And, having watched the environment of Castro Valley go from one with a great deal of open space down to one where one would hardly want to raise a child because there is no place for the kid to play. I dislike the ideas that these opportunities are continuously decreasing. Like it or not East Bay M.U.D. is one of the major open space planning agencies and in addition to being a water district you are also an open space district. And I think in planning the quality of life in this area it is absolutely your responsibility to place a high priority on this

issue. You have the opportunity to reduce our quality of life if you so chose. I would like to argue that in attending to true costs you might consider expending capital on things that look currently like maybe you don't want to do that. Imaginative things, such as dual water supply systems so that we don't put the high quality mountain water onto cars, taking bird do off the windshield and see to it that it does come out the tap so we can drink it.

Oddly enough, I agree with the gentlemen who doesn't want all that garbage going down our gullets and I hope you can find a way to do it without also seeing to it that we haven't got any place to hike. Thank you.

SKAGGS: Thank Mr. Burke. Tom Hedges, followed by Susan Adams, followed by John Woodbury.

TOM HEDGES: Good evening. I want to commend you for your concern and for the effort put forth in this vital matter. The water supply management program betokens a great deal of planning work. I've examined the plan summary very closely and wish to comment on some of the alternatives. I agree with the need for water conservation and reclamation, levee and foundation improvements in the Delta area and inter-ties with other water agencies. I think that the use of Delta water should be considered only as a emergency measure. The alternative which I oppose is water banking. I oppose water banking because of the expense, the environmental impact and my belief that it would encourage growth and development. I believe that the need for additional terminal storage can be reduced in three ways. By adopting rigorous

programs to encourage conservation, rigorous programs to encourage reclamation and by ceasing to annex new service areas. The projected possible savings shown in Tables 9 and 10 on conservation and reclamation amounts to 34 thousand acre feet per year or almost a quarter of the projected capacity of the new reservoir.

The projected cost of such a reservoir is about \$150 million. I believe that the District should seriously consider how much more water could be saved by spending a fraction of that amount on an innovative no-holds barred program of conservation and especially reclamation. For example, I believe that there is a vast potential for saving water by individual customer gray water reclamation for yard irrigation and toilet flushing. Such reclamation also reduces the demand for sewage treatment capacity. I believe that a small fraction of the cost of a new reservoir could foster a new industry to provide small scale gray water reclamation equipment, creating employment while saving viable water. I realize that the notion of ceasing to annex new areas is considered by some to be outside the proper role of the District. Yet, I believe that if it can be done to relieve the present shortage, it can be done to prevent future shortage. The District ratepayers of the present are under no obligation to subsidize unlimited future growth.

If the District builds to accommodate projected growth, they enable that growth. If the District does not build, they discourage that growth. Some argue that it is not the role of the District to influence growth policy. I say, that you will influence it no matter what you do. Eventually, the line will

have to be drawn on growth. I ask you to draw it here and now.

In conclusion, I ask you to commit the District to maximum effort on conservation and reclamation programs, proceed with the aqueduct, watershed and treatment improvements, but turn away from increased terminal storage and its untold environmental damage and huge cost.

SKAGGS: Thank you Mr. Hedges. Susan Adams, followed by John Woodbury, followed by Elliott Abers.

SUSAN ADAMS: I'm Susan Adams and I'd like to urge the Board to consider continuous conservation before taking measures such as dam building. Let's behave as if drought conditions always exist, because they do in this area. Conservation is cheaper than building reservoirs and the cost of a reservoir would buy a lot of low water use toilets for people in this area. It's safer too. A dam may not be able to withstand a major earthquake, but water conservation has no safety repercussions. There would be no need for low quality water from the Delta if conservation was always in force. And, last but not least, an actual drought would be far less traumatic if conservation were a way of life. What's needed is consumer education and awareness of our dry climate be driven home to everyone who lives in this area. Application of technology at the user level in terms of water conserving appliances, toilets and sprinkler systems.

After all, if there's anything around here in shorter supply than water its open space. Not only would Buckhorn reservoir cover a lot of it, but subsequent development would further reduce our precious uncovered land. Life in the East Bay would

be seriously diminished by further unbridled development made possible with water from a new reservoir. I urge you to rest your water planning on conservation. Thank you.

SKAGGS: Thank you. John Woodbury, Elliott Abers, Peter Smurr.

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JOHN WOODBURY: I'm John Woodbury. I'm speaking tonight on behalf of the East Bay League of Conservation Voters. In the draft environmental impact report, there is a comment made, and I believe staff made it again tonight, that the cost to the reservoir would represent about a 2% increase in rates for existing customers. That's a bit misleading as I understand it. In the early years of the bond repayment, most of that repayment would be made by existing customers. New developers, new developments would only pay for costs if they come in later. The bulk of the debt service paid by developers occur in later years. In other words, by building a capital intensive project such as the Buckhorn reservoir, we are requiring ourselves to approve future hook-ups and new development in order that existing customers do not end up paying for the whole cost of the reservoir. This, to my mind, is a growth inducing impact of the reservoir proposal. 15
The draft environmental impact report is based on the assumption that the District has to provide water to every developer that walks in the door. That simply is not the case. The California State Code and the Municipal Utility District Act, which sets up and authorizes East Bay M.U.D. requires that utility districts such as East Bay M.U.D. provide reasonable service. Reasonable service does not mean that existing customers have to pay higher

costs in order to accommodate new growth. It does not mean that existing customers should have to accept a greater risk from the drought in order to accommodate new growth.

There are many examples throughout the State of other water districts that have said "we can't provide for more hookups, we can't accept further annexations to our district." East Bay M.U.D. has been negligent in reneging its role with land use planning. I think the draft EIR is remiss until it fully takes into consideration the issue of growth and whether or not there should be further annexations to the district. Thank you. (4)

SKAGGS: Thank you. Mr. Abers, Mr. Smurr and we're going to take a break at 10:00 o'clock and I'll give you an idea of where some of you stand right before that break in terms of the speakers.

ELLIOTT ABERS: Elliott Abers, I don't represent anybody but myself. I previously was up here and told to be a volunteer for Mr. Connors. I was more a draftee since I never voted for Mr. Connors in Moraga. My main concern is the way the EIR was written. To me, it was written after it was decided to build Buckhorn and it was designed to finish that purpose. The EIR gives very short shrift to building an aqueduct that is not subject to floods or earthquakes and might take a different route to our area. The EIR gives very short shrift to safety. The EIR is rather complete though in the way they contacted people to get their information. (6) (13)

In Appendix B there is a list of people contacted and organizations contacted and they list two schools in Moraga on Camino

29 Pablo, in front of which the seven-foot-diameter aqueduct will go at high pressure and the persons contacted were the two office secretaries. I don't see how that could lead to a good input from the school district. Now I have another suggestion of where to put all this water. Mayor Dabel and the Orindans seem to like dams. Had he considered enlarging Briones?

SKAGGS: Peter Smurr and then we'll take a break and right before the break I'll give you a sense of where you are and how many there are to go.

PETER SMURR: Thank you President Skaggs and Members of the Board, Mr. Gilbert. I am Peter Smurr and I do represent Save the American River Association out of Sacramento and we would first just like to note that you are not alone in your problems. Your sounds tonight are horribly familiar. We're going through them in Sacramento in the same way.

In February I was at the 10,000 ft. level hiking about Lake Tahoe and there was no snow. We have had a little bit of coverage since that time. Last year we went through May with temperatures of 107 degrees. This year we've had two days in May over 100. Things are changing and we are doing some soul searching, all of us.

We note however, to get back to the realities of where we are. Inasmuch, I'm not trying to de-emphasize the realities of what I just said, and we are human. We do note in the more or less mechanics of trying to answer your needs against ours and all the problems we're facing, we note that Manager Gilbert appears to have included in his plans and admit that they are

considering use and appear to bring within your plans for management in storage American River water. The first thing is as you do know we wholeheartedly, steadfastly and will endlessly resist taking American River water from the Folsom South Canal. We will note, however, that when we are speaking of this we would ask that in consideration of your plans for storage and management that you do consider some general things.

To make things short and get on with your work tonight, it would be these things. Insofar as these plans do include the use of American River water from Folsom South Canal, we do object to the use, and suggest that you use and discuss other alternatives . . .

[END OF SIDE 1, TAPE 2]

. . . we think you should note. First, we would like you to address with the realization of changes in water treatment which have just recently been suggested, we ask that the cost and extent of the required water treatment or purification necessary for your various proposals be precisely stated and included within those proposals we would note the second thing which we would like to have discussed very clearly. That would be, show the variations in the amount of energy, or again cost for this, to pump any American River water up to and into these terminal reservoirs whether it's done for water banking or for other planning or management uses. And, we would like to include within that whether it would be two different alternatives. What would be the alternative if you took water from the 102 ft. elevation at Folsom South Canal? That's all it is in height. And what would be the variation if you took it from mean elevation of

say where the Sacramento River and American confluents exist at 20 ft. above sea level. I do thank you for your turn and your work tonight and smart quips are abounding. Please know that we do have sympathy for you, we request the same for you and so long as there's an American River that flows in it, we'll be here trying to defend it. Thank you very much.

SKAGGS: Ok. Before we take the break let me tell you who the next ten speakers or so are so that those of you who are close won't disappear. Mr. Mowris, Mr. Brydon, Mr. Dears, Mr. LeVeen, Mr. Lamb, Mr. Meuller, Mr. Shanahan. Let me also tell you the last 20 people who we may never get to tonight and as I said before we will send you notice of future meetings and give you first crack then or you can send in written comments. Steve Meyers, Bettie Graves, Lloyd Perry, Peter Eylin, Paul Bloyd, Brian Gaffney, Daniel Barron, Donald Forman, Charles Bonny, Eloesser, Tony de Bellis, John Coveney, Jim Blinkenstaff, William Fisk, Kirk Peterson, Herb Crowle, Bob Walker, Stuart Flaishman and Chris Valle-Riestra. So those of you whose names weren't called are some place in the middle and you can judge accordingly. And, we're going to take about a ten minute break now just to stretch.

Ok, get back to work folks. The first person up is, I think . . . Jerry. Mr. Mowris. Folks, we're back at it.

ROBERT MOWRIS: My name is Robert Mowris. I'm a senior research associate at Lawrence Berkeley Laboratory. I have an undergraduate degree in mechanical engineering. A masters degree in civil engineering and most of my work now is involved with energy conservation research and other resource conservation.

I want to talk tonight about water conversation. Many other people have mentioned tonight that the EIR downplays the role of water conservation in reducing demand I'd like to bring up a really good example and that example is San Jose, as a city which is currently implementing what the EIR probably calls an intense water conservation program. San Jose is currently involved with a very accelerated water conservation program that is intended to save about 12 million gallons a day and they want to complete the program by the end of 1988. The cost of the program is about \$5.5 million and the residential part of the retrofit program was started in the summer of 1986 with a goal of reaching 216 thousand households and saving about 6.5 million gallons of water a day at a cost of about \$3.2 million. So far San Jose has had a 92% retrofit success rate. In other words, 92% of of the homes they retrofitted still have the water conservation shower heads and toilet dams in place. If a similar program like the San Jose program were implemented in East Bay M.U.D.'s district, we could realize about a 10 million gallon per day savings at a cost of probably closer to \$5 million. And the annual savings to East Bay M.U.D. residential rate payers would be \$5.5 million on water bills and \$7 million on energy bills. No one really talks about the energy side of it, but using water-saving shower heads saves a substantial amount of energy. Something like 12 therms, 12 hundred thousand BTU's per year per water-saving shower head per capita.

The draft EIR states on pages 7-8 through 7-13 that retrofitted measures by 2020 could only save 2.7 million gallons per day. As David Fullerton said this is about half what the East

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Bay M.U.D. projection was in the 1985 urban water management plan that said East Bay M.U.D. could save about 5.3 million gallons per day. The draft EIR also revised downward the total estimate of savings from all water conservation measures, as Fullerton said, from 18.1 million gallons per day in '85 down to 6.9 million gallons per day in the current version. The other thing I wanted to say was also quoted tonight and that was what the EIR perceives as conservation having a somewhat negative impact on the region's economy. That was already quoted tonight, so I won't requote it.

But in any case, I would like to offer as a rebuttal to this the fact that a well designed and effective water conservation program could definitely save much more than what the current EIR states and I really see technical inaccuracies in the current version of the EIR. I would hope to see those technical inaccuracies corrected in the next version. I also cite the City of San Jose for having implemented a fantastic water conservation program. I think it should be looked upon as a model and since we're so close I would think that East Bay M.U.D. could work, the engineers could work very closely with San Jose to provide perhaps even a better water conservation plan. San Jose, by the way, is only using water saving shower heads and toilet dams. I gave a set of that kit to Helen Burke. She has it up there at the desk, she can distribute it around. I'm going to get seven other kits to give to the rest of the Board members so they can see what San Jose is doing and compare it to what East Bay M.U.D. is doing. There is quite a difference. I think we could do even better than what San Jose is doing easily at not much more cost.

The other thing that I'd like to mention is that in the EIR the staff report said that 30% of the homes in the district already have water conservation technologies in place and I'd like to add to this that San Jose's careful studies show that 40% of houses and apartments built before 1987 did have water saving shower heads and flow restricters in place, but those flow restricters have been removed because people just removed them. And, they petitioned the California Energy Commission to put in a new regulation to monitor more effectively manufacturers who are selling shower heads in the State to make sure that they can't be tampered with, and to improve the flow rates. A new standard went into effect January 1, 1987 which is hopefully going to rectify the problem. So, I would submit to the Board tonight and to the people here that we can do a lot better than what we already have in place and I'd like to see us implement an effective, well-planned water conservation program better than San Jose's program, first, as a higher priority before we flood pristine beautiful wilderness area like Buckhorn Canyon. Thank you.

SKAGGS: This document here from San Jose was distributed by you, is that correct?

MOWRIS: Yeah, its got a lot of supporting evidence that was cited in my comments tonight and I distributed that as well to the Board.

SKAGGS: Thank you very much. Mr. Brydon, followed by Mr Dears followed by Mr. LeVeen.

CHARLES BRYDON: Thank you. President Skaggs, Members of the Board, my name is Charles Brydon and I am here speaking as the chairman of a group that is dealing with this water issue as it

affects a particular region of the District, and that happens to be the area from San Ramon all the way out to Moraga. The San Ramon, Danville, Diablo, Alamo, Walnut Creek, Pleasant Hill, Lafayette, Orinda, etc. . . . that portion of your district which lies over the hills primarily to the east of us. W.A.T.E.R., which is the name, just an acronym for the group, came into being primarily to deal with the inclining block rate structure concept which you have adopted to deal with the current declared emergency. However, it was recognized very quickly that it was necessary to take a broader look at this whole issue and to be knowledgeable about the planning efforts that have taken place in the past and, hopefully, to be able to make some contributions concerning those that will take place in the future. One of the things that we did first was to create a task force that would deal with water resource planning and, fortunately, I'm followed here by a Mr. Donn Dears who will speak specifically to that issue.

What I would like to comment upon primarily is that, and this has to do with the appropriate topics under the category of process, and that is that we have another task force that is dealing with public awareness. That task force is organizing meetings throughout the region. We have another one coming up in Walnut Creek next Tuesday on the 31st and you are all cordially invited, have probably all received letters or will be if you haven't received them already. The idea is to let the people who have traded the asphalt and concrete of this densely populated urban side of the hill for another lifestyle, which involves growing flowers and beautifying gardens and appreciating the green things

that we find growing in our part of the County. And that means that there are going to be a lot of people who I hope are going to have some things to say about those values as well as concentrating solely upon the idea of conservation.

Conservation is a wonderful thing. I believed in it all of my life. I consider myself a naturalist. I have hiked most of the Sierra, all of the John Muir trail. I have always prided myself in believing in that as a way of life, in fact. But, I am really distressed when I finally do come out of my lethargy and get back into an arena like this and I find this Board being presented with that and only that as one point of view primarily expressed as an idea, conservation, by people who live here in this densely populated part of the County, an idea they expect to be practiced by somebody else . . . mainly us, because we're the only ones that are going to be primarily affected by it. I think it's awfully one-sided and I think its very regrettable in fact, that a really good idea has been so terrible run into the ground and that you haven't heard anything else. I think I can promise you that you are going to hear something else. Thank you very much.

SKAGGS: Thank you. Mr. Dears, followed by Mr. LeVeen, followed by Mr. Lamb.

DONN DEARS: Good evening. I thought I was going to have to say good morning. It's taken so long. Yesterday, we presented the Board with petitions containing over 4,000 names, many of whom experienced the drought of '76-'77 and who suffered great financial loss. The total losses were estimated between \$75 million and \$100 million in the district. Now we're astonished

to find the District in a similar crisis again this year. In addition, as we have already heard the aqueduct can be severed by an earthquake or flooding, cutting off the District from its supply of water. There are 12 separate faults that could cause such an earthquake and which could sever the aqueduct for 10 months or longer. A quake of this magnitude is predicted to occur once every 23 years. By the year 2020, the existing reservoirs will not hold enough water to last for ten months even if water use is restricted solely to indoor use. The risk to public health and safety is far greater than alluded to in the water WSMP summary. There is serious and legitimate concern whether there will be water available for fire fighting, sanitation or other human needs, and with no water available for anything other than indoor use, the economic disaster to all communities would be far greater than we experienced in '76-'77. The failure of the aqueduct imperils all the people no matter where they live in the East Bay M.U.D. district. Delta water cannot be counted on as an emergency supply during the aqueduct failure since salt water intrusion can make the water unusable. It is estimated that Delta water could have a salt content of 2600 micrograms per liter, excuse me milograms per liter, or roughly twice the relaxed emergency standard or five times the standard under normal conditions. We urge the Board of Directors to approve the construction of new terminal storage facilities of at least 145 thousand acre feet.

Furthermore, we urge the Board to investigate means for verging the supply gap between now and the time terminal storage

facilities are operational, which is estimated to be 1995. Currently, there is a seven year water supply gap during which communities are exposed to the risk of catastrophic failure of the aqueducts. Now we support, as Chuck mentioned, we do support conservation and encourage the Board of Directors to undertake existing and new conservation programs. It should not, however, be policy to plan for water needs based on rationing. Such a policy makes the system weak and is likely to create the type of water shortage that can imperil public health and safety. Rationing is a self-fulfilling prophecy. Now we want to help address these issues. As Chuck mentioned, we will be holding a series of public hearings where we can discuss the alternatives and explain why terminal storage is the only solution to perpetual water shortages and living in fear of an aqueduct failure. Two of our committee members, that is the resource planning committee, are civil engineers. One with 15 years experience, the other with over 30 years experience. I'm also an engineer by training. Some of our group have lived in different wards within the district and bring a balanced perspective to our work. Now our first meeting, we plan to have it in Danville and we would like to extend an open invitation to all the Board members to attend our meeting. We'll contact your offices for dates when you might be available.

Now, members of our committee will be meeting tomorrow morning with the Contra Costa Water District and will visit the Los Vaqueros site. Tomorrow afternoon we'll be touring the Buckhorn site. Now for the next seven years the residents of the

Water District must live in fear. Fear of failure of the aqueduct and fear of recurring droughts. Now we urge the Board to get on with the task of providing water to its customers. Thank you very much.

SKAGGS: Thank you. Mr. LeVeen, Mr. Lamb, Mr. Meuller.

PHILLIP LEVEEN: My name is Phil LeVeen. I'm an economist. I've study mainly agricultural water issues with which I'm more familiar than urban issues, but I have spent some time going over your technical report and the EIR and I have a few thoughts about the costs and the relative cost effectiveness of a terminal storage facility as opposed to non-structural alternatives. My non-structural alternative that I'm using is essentially purchasing agricultural water during dry years.

It's very hard from going through the technical report to come up with financial data. Costs are provided, but I don't really find in that report what expectations of interests rates, length of term of the bonds, etc. It's just not there. So I've had to sort of work backwards from your final cost and try to figure what your assumptions are. It seems like you're assuming roughly about an 8% interest rate on 30 year bonds. Looks to me like you're expecting to spend about \$15 million a year for the foreseeable future if you decide to embark on this dam. So it seems to me that that's roughly the cost. Now the report also says that about 67% of the capacity of this dam is for, in effect, security and for water shortage and I think the other 33% is for growth. And, so that means that you're spending roughly \$10 million a year an insurance program against water shortages,

periodic water shortages and the possibility of some sort of catastrophe in the Delta.

The question of whether \$10 million as an insurance policy is cost effective or not obviously depends on what the alternatives are. To make my case the worst possible for my non-structural alternative, I have assumed your 270 million gallons a day rate of consumption. I have used the figures in your technical report to estimate the probable occurrence of water shortages given that level of demand and then what I have done is assume that you have purchased during the periods of time when there are shortages water from agriculture to make up the difference and I have computed the cost of those purchases and compared them with the cost of building the dam. Or at least that part of the dam which is for security and water shortages.

Assuming your 270 million gallons a day consumption, the report suggests there will be roughly six occurrences of water shortages over the next approximately 85 years. That is to say, given current rainfall patterns, expected rainfall patterns will continue the past. That assumes that no dam is built. Six periods in the next 85 years will create a need for more water. If you purchased the entire amount of water needed to make that 270 million gallons per day a reality during those six periods of water shortage over the next 85 years, you would have to spend something like \$40 million to purchase the water from agriculture. That's \$40 million over 85 years which works out to about \$400 thousand a year on average. If you compare that \$400 thousand per year with your \$10 million expenditure on a dam you

can see that you would be spending about 4% or 5% of the total dam costs using a non-structural alternative.

I have deliberately overstated the cost of purchasing water. I have used a \$75 an acre foot fee. I know a lot of farmers who would be very happy to go out of business at that price. Most farmers generally do not generate more than \$40 or \$50 an acre foot net income, so at \$75 I think you could do very well. That still . . . so what I'm suggesting is that purchasing agricultural water during dry years to meet your domestic demands would both benefit you and farmers and save lot of money. Now, the issue of the, I wanted to raise the issue of development.

The issue here is if we did not go to 270 million gallons a day, instead simply maintained our current level of 220 million gallons a day, the technical report suggests that we really expect only one or two years of shortage over the next 85 years and the magnitude of those shortages would be much less. In other words, the magnitude of the shortages and the rate of occurrence will grow mainly because of projected growth. Now the report suggests that 43% of the cost of the dam should be borne by existing users and the remaining cost by new users. Well, by my calculations, however, 80% of the problems with water shortages over the next 85 years, 80% of that would be related to growth, not 43%. 80% would be related to growth, which would mean that if we maintained our current levels of consumption and we wanted to insure that we didn't have water shortages given current levels of consumption we could probably do this for a total cost over the next 85 years of \$10 million or about a

little over \$100 million a year, which is about 1% of the cost of a new dam.

Now the implication of this as well is that this allocation between existing users and new users is wrong. It seems to me that roughly 80% of the cost of this dam ought to be borne by new users since they are the ones who will be imposing the additional problems on the whole system by expanding its capacity and, therefore, pushing it against the limits of our water supplies. If you then take that 80% and figure -- that means new users should be paying considerably more than you have suggested in your document; I figure roughly 40% higher rates should be imposed on new users and existing users should only be paying about 20% for this dam, if you in fact go with it.

I wanted to talk a little bit about risks, but I will . . .

WARREN: Mr. Chairman. We're going to lose our speakers and I'm going to again ask you to please limit them to three minutes.

LEVEEN: Thank you very much and I'll submit these in writing.

SKAGGS: Mr. Lamb, Mr. Meuller, Ms. Graves of the Moraga School Board, Mr. Shanahan. Is Mr. Lamb here?

WARREN: I think they've left.

SKAGGS: Is Ms. Graves here? (Inaudible) Are you from the School Board?

SPEAKER: No. I was at the School Board meeting last night (Inaudible)--

SKAGGS: Is the School Board going to write to us. It would seem like that would be a very wise way of doing it. Do you have

a card in here sir? I think that we may get to you quickly. Mr. Shanahan, Mr. Tuttle?

WARREN: Mr. Tuttle left.

SKAGGS: Mr. Tuttle left? Ms. Nelson.

(Inaudible)

GREGORY JOHNSON: My name is Greg Johnson, I live in Moraga. I'm going to talk about some of the . . .

SKAGGS: Mr. Johnson, your card was next, too.

JOHNSON: Oh, ok. Yeah, we came in together. I thank you for the privilege of speaking before you. I'm going to talk about the land use and social impacts of the Buckhorn reservoir project. Something that really hasn't been emphasized very much and I'm going to discuss the draft EIR. And I've got written comments and I'm going to summarize them. By selecting Buckhorn reservoir, East Bay M.U.D. would chose the one terminal storage option with the most far-reaching and significant land use and social impacts. Populations within a five-mile radius of Buckhorn is more than 10 times the size of the combined neighboring populations proximate to the two other reservoir sites. As a consequence, Buckhorn is the only reservoir option which affects sensitive sites, such a schools, senior citizen residences and medical facilities. Furthermore, it is the reservoir option which most intensifies traffic congestion on heavy heavily trafficked, two-lane residential and urban roads. The draft EIR either ignores or under-emphasized these facts. Each point deserves careful consideration. First of all, the sensitive sites issue.

First of all schools. The draft EIR indicates that the proposed Buckhorn aqueduct could disrupt daily activities and impede access for at least ten months to three Moraga schools enrolling 1,050 students ranging in ages from 3 to 13. At no point, however, does the draft EIR discuss safety considerations associated with the construction of a nine-ft. trench proximate to the schools necessary to install the aqueduct. Furthermore, at no point does the draft EIR discuss the safety considerations associated with the significant narrowing of already heavily trafficked roads proximate to these schools. Moreover, the draft EIR is incorrect in stating that evening and summer activities do not occur at these schools. In fact, such activities regularly occur at each.

Secondly, I'm talking about the senior citizens. The draft EIR completely omits discussion of a senior citizen residential home located on Canyon Road in Moraga directly proximate to the excavation and construction of the aqueduct. The facility houses 70 persons with an average age of 76. The majority of the residents are ambulatory. Directly across the proposed excavated road are medical, dental, optometry and pharmacy offices used by these residents. At no point does the draft EIR discuss these issues.

Traffic, and most importantly in Castro Valley. During the four-year construction phase of the Buckhorn Canyon itself, I'm not talking about the aqueduct now, but within the Canyon . . . over 200 truck trips per day would be required through a hilly and partly residential area in Castro Valley. The impact of noise, safety and congestion and repeated access on the residents of

this section of Castro Valley is not discussed in the draft EIR. Again, traffic in Lafayette and Orinda and Moraga. Construction of the reservoir and its aqueduct will bring an undetermined number of trucks and vehicles hauling heavy equipment onto already heavily trafficked two-lane roads between Route 24 and Moraga. The most significant effects will be on Moraga Way between Orinda and Moraga, and Moraga Road between Lafayette and Moraga. Each road is overcrowded during significant periods of the day. The draft EIR fails to discuss the intensifying influence of the increased vehicle traffic on already congested roads and that's something that I think if the 88 people in Orinda had known about they wouldn't have supported this project nearly to the degree that he describes.

This discussion highlights a significant potential hidden cost of the project. If it selects Buckhorn reservoir, clearly the most socially disruptive reservoir option, East Bay M.U.D. has exposed itself and it's rate payers to significant liability risks. As a self-insured entity East Bay M.U.D.'s ratepayers could ultimately bear the expense of bodily injury, vehicle and property damage claims, as well as as associated legal expenses. For example, during a minimum ten month construction period of the aqueduct, in the aggregate school children will take an estimated 400 thousand trips to and from school in close proximity of the the construction site. Adding weekends, evenings and summers a total of half-a-million trips by 3 to 13 year old children will occur during the construction phase of the aqueduct. A disabling accident to just one child with a life expectancy of 60 to 70

years will add 5% to 8% of the \$152 million price tag of the reservoir. The liability and hidden cost issues are not discussed in the draft EIR.

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In summary, Buckhorn reservoir is just one more example of a project which looks great on a map or it looks great on an engineer's drafting table, but makes no sense from a human standpoint. Engineers and planners sometimes forget that human beings must live with the plans they create. This project exposes thousands of people to needless risks and hardships without demonstrating a commensurate overall benefit. Thank you for your attention.

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SKAGGS: Uh, let me read off several here and see if we get some movement in the audience. Diane Nelson, did you yield permanently or just temporarily? Herb Sandal, Steven Thaw, Karen Garrison, Andrew Cohen, Wick Kenney, Carolyn Herrington, Seth Adams, Carolyn Edwards, those of you who hear your name might move towards the microphone. Bea Cooley, Jerry Meral, Alina Larman, Matthew Blumental, and you are?

SPEAKER: Karen Garrison.

SKAGGS: Thank you very much.

KAREN GARRISON: I'm speaking both as an East Bay M.U.D. customer and as a member of the water policy group. And given the time limits I'm just going to restrict my comments to the coverage of alternatives in the EIR. I was disappointed to find that the EIR seriously evaluated two very similar alternatives to meet the growth and security needs of the District. A reservoir and another reservoir. With a third reservoir waiting in the

wings. On the basis of the abbreviated review of alternatives that did make it into the EIR, and without any attempt to challenge the report's methodology, I'd like to make three observations.

First, it appears that a certain package, i.e. conservation at 7 million gallons a day, reclamation at 5 million gallons a day and the Woodbridge exchange at 39 thousand acre feet per year would easily meet projected district demand through the year 2010, assuming the 39% deficiency in the second year drought and, remember, that the second year drought is a low probability event. Inter-ties appear to offer real promise as a solution to earthquake vulnerability and further study was recommended in the program summary. I just want to ask the question, why don't these alternatives warrant a full-fledged investigation?

Second, it appears to me that the decision to build a reservoir at Buckhorn or Pinole involving the irreversible loss of increasingly rare environmental resources and risks that have been discussed here tonight would be based on something like a house of cards. The need will be there if growth projections are accurate, if usage predictions are accurate and if alternative are infeasible and/or are not pursued. These if's become "iffier" the farther out one extends the line. Given the uncertainty alluded to in that series of if's, isn't it worthwhile to at least seriously investigate the more environmentally benign alternatives and make the decision the build a reservoir 10 or 20 years down the road only if necessary.

Finally, while alternatives to reservoirs are mentioned in the report, there is no serious comparison of their environmental

impacts with those of reservoirs. I would propose that a supplemental EIR be requested as a condition of certification of this one and that it examine at a minimum the possibility of interties and the Woodbridge exchange. Thank you.

SKAGGS: Is Andrew Cohen here? Would you wave your hand? Wick Kenney, Carolyn Herrington, Seth Adams, Carolyn Edwards, Bea Cooley, Jerry Meral. Is Jerry Meral still here? Ok. Alina Larman, Matthew Blumenthal, Arthur Green, Mary Anna McKinley, Roger Fiske, Steve Meyers, Lloyd Perry, Peter Haylin, Paul Bloyd, Brian Gaffney, holler at me because my eyes aren't great. Daniel Barron, Donald Forman, Charles Bonny, Nina Eloesser, Tony DeBellis, John Coveney, Jim Blickenstaff, William Fisk, Kirk Peterson, Herb Crowle, Bob Walker, . . . he's Petral's (?) counsel? Stuart Flashman.

WARREN: Stuart was here, did he leave?

SKAGGS: Chris Valle-Riestra, Gary Sargent, Mr. Doelle is here, got you. Looks like, is there anybody who is going to speak whose name wasn't called? It looks like we have half-a-dozen people left so we're making progress. As I said we're going to give notice to these other folks of the next hearing. Ok. Andrew, thank you for waiting.

ANDREW COHEN: My name is Andrew Cohen. I am a member of the California Water Policy Group and I am a doctoral student in the energy and resources group at U.C. Berkeley. I've been studying water policy at the energy and resources group for several years and one of the things that I have learned is that building dams in an old tradition in California. In no other state in the

country have so many river bottoms and so many canyons disappeared under so many acre feet of stagnating water. But, in the last couple of decades this tradition has started to weaken. There are a couple of good reasons for this. One is that the cost of constructing dams has risen dramatically, another is that our increasing environmental awareness has made it unacceptable to flood ever more river valleys and canyon bottoms. And, as well, water agencies are becoming aware that there are alternatives to building dams. As a result of these things, no reservoir as large as Buckhorn has been built in California since 1978. Now these recent trends would argue strongly for a thorough and extensive consideration of all alternatives before going ahead with any proposal to build a new major dam like Buckhorn. But what the water management plan that has been given out by the staff gives us is not an extensive review, but a cursory review of alternatives whose only intent is to discredit them.

19 Since I'm limited for time I'm not going to give you all the reasons and all the explanations of this cursory review. I'm just going to give you one example of the staff's approach towards alternatives. One of the advantages I have of being a student is that I've gotten used to sitting in libraries and pouring over documents and last summer one of the things that I did is I went over the documents that were submitted in the American River lawsuit that East Bay M.U.D. is involved in, and I came across this interesting document, whose title is "State Water Resources Control Board Exhibit 586266." It was submitted last spring by the staff and what it is is a consideration of

alternatives. In this case the project was the American River aqueduct. One of the alternatives is the Woodbridge exchange, which was talked about earlier by Mr. Kolm providing Delta water to Woodbridge so we could use more Mokelumne River water in the District. What staff had to say about the Woodbridge exchange was that it would take \$195 million pipeline for it to work including 75 miles of 5 ft. diameter pipe between Walnut Creek and Camanche Reservoir. Staff forgot that they already had three pipelines that go from Walnut Creek to Camanche Reservoir. That's an example of staff's consideration of alternatives and they way they review it. Even more interesting than their review in here of the Woodbridge alternative is the review of terminal reservoirs. In this document the American River was the project. Terminal reservoirs were the alternative. What do they say? They're the highest cost alternative. That means things like Buckhorn. They say "dam sites located in urban areas with active earthquake faults" implying that there are going to be problems with earthquakes. And their conclusion, when they consider terminal storage as an alternative, is that its not feasible. That's a quote "not feasible." The same kind of approach is taken in the water management plan that was just given out. The key concept, the same in all the studies that E.B.M.U.D. has done, is that if its an alternative its no good. We've heard about a few of them tonight, a few of the problems. There is no reasonable economic analysis within the report of alternatives. There are misleading statements about how long it will take to repair the pipeline in the case of an earthquake break, there is an

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there is an overstatement of the problems with selenium intrusion following a pipeline break. The earthquake problems are ignored, the problems with Buckhorn. And, to my mind, the worst of all is that the alternatives are set up one by one and knocked down one by one and they're never combined into a single program that might provide a reasonable alternative. Bits and pieces of what has been proposed in the management plan if combined intelligently could give us an alternative. The list could go on and on. But, I'm going to stop with that list, because time is so limited, and talk about process, which Mr. Skaggs asked us to talk about.

Your job as Directors is to take the sales document that the staff has given you and try and figure out if that is the way to go or if there are better alternatives. Now, you don't have any help from staff on that. You're going to get comments from people here and comments in writing, but comments are not enough to really consider the alternatives. They are done by people in their spare time, they're done by non-professionals. Now David Fullerton has suggested that you take this document and you give it back to staff and you have them redo it and do another set of alternatives, but if you do that you'll get the same kind of garbage you got the first time. If you want to do a serious consideration of alternatives what you have to do is contract out that work to some consulting firm and direct them to look at alternatives, not to look at Buckhorn, but to look at alternatives; to talk to the critics of the plan and to try and put together the best alternative they have. Once you flood that

valley out in Buckhorn you'll never be able to bring it back. Now is the time to look at alternatives and find out what else can be done. Thank you for listening.

SKAGGS: Thank you. Jerry Meral. Who are you? You're not Jerry Meral, I know that. Is Jerry still here? Yes. Why don't you work your way Jerry and Matthew Blumenthal, too, please work your way towards the podium.

BEA COOLEY: I'm Bea Cooley and I'm conservation director of a group in California based in Sacramento called Friends of the River. I came to represent the American River, but I have a couple of comments that I would like to make before I get to that. It doesn't seem to me after looking at all of the documents that were prepared and sent to me that it makes very much difference what the district does in terms of how much money is spent on any alternative. In fact, I was going to say that you could realize a great deal of savings by reducing sewage treatment as a result of lower delivery costs and the other things associated with water conservation. But, I don't think that really matters to your ratepayers. You're very fortunate to have the kind of rate base that you have and the expenditures for things like American River water that you have never been able to get and the continuing litigation on that, really don't seem to matter. But I think what will matter to the ratepayers is the effect of district water policy on growth, and when I add up the American River water and the difference between your Mokelumne entitlement and the amount of demand that you predict for 2020, I see doubling the population of this area and I think that's where

10 the ratepayers eventually will rise up and demand a change in policy. I just wonder why the District doesn't really take a leadership role and become the industry's standard in things like treating Delta water for example. My husband is an engineer and he warned me that I shouldn't talk to engineers without keeping firmly in mind that engineers like to build things. And I know that it's not really as sexy to be educating kids in school and persuading people to change their toilet and to use water conservation, but there are a lot things for engineers to do besides build dams.

14 To the American River. It's important to realize that if the Folsom South Canal is extended in order to allow for the District to take its entitlement of water that that opens the door for the diversion of almost 600,000 acre feet out a firm yield of 1.5 million acre feet down the Folsom South Canal. That will virtually destroy the values of the American River.

[END OF SIDE 2, TAPE 2]

A constituency for the American River and for the lower American River Parkway is growing and there is an increasing recognition of the effect that Bureau of Reclamation contracting policies and East Bay M.U.D.'s desire to take American River water will have on the American River Parkway. And I think we're somewhat misled by the guarantees that we get that if the litigation does favor the District that water will be taken only during times of plenty water, and not during a dry year. However, as I was contemplating the situation that exists in the American River today, we will have the second year of a virtually failed salmon spawning in November because the flows in the River will be half

what they were last year, but they're still not as low as law allows the Bureau to take them. Even though the Bureau and everyone else understands that Decision 893 does not represent adequate flows for the river and, in fact, Decision 1400 probably doesn't either. But, they're only bound by Decision 893. So flows can go down to 250 or 500 cfs depending on the time. East Bay M.U.D. could be taking water from the American River down the Folsom South Canal even under those conditions. I'm not persuaded by the promise that water would only be take during time of plenty and, in fact, I would like to quote one of your own. I noticed in a newspaper article concerning the Brentwood concern about not being able to get water from East Bay M.U.D. this particular year. Gayle Montgomery was quoted as saying that "at the time the agreement was made with Brentwood there was plenty of water and after all, once you turn on the tap its very difficult to turn it off." We along the American River and, in fact, statewide members of my organization and others understand that it is very difficult to turn off the tap and we don't want you to turn it on.

Further, there are 14 to 16 million people in the rest of the state who would very much appreciate, despite comments to the contrary by some homeowners, would very much appreciate having good clean American River water running into the Delta in order to protect the quality of Delta water for those who must drink it and who have no choice and must drink it all the time. And I think that's of ultimate importance. I appreciate very much your time and the opportunity to speak to you. Thank you.

SKAGGS: Sorry we don't have the time to debate it, so I will bite my tongue. Mr. Meral.

JERRY MERAL: Thank you Mr. Chairman. When I worked for the State, I had many opportunities to do what you're doing tonight and that is sit up there and listen to people abuse my staff. And, its not easy and the natural reaction is to defend them and I understand that, but there are some questions that I think you have to ask yourselves. First of all, what is this document that's before the public and before yourselves tonight? Is it the final EIR on Buckhorn reservoir? Doesn't say. Maybe you're going to do another one. No one really knows, at least I don't know. Is it the final EIR on the Lower American River project, because there's a lot of discussion of the Lower American River in here and yet it doesn't say. And, even on other projects to find out what it actually does and so I don't think that at least our organization, the Planning and Conservation League that has about a thousand members in your district, knows what this really is. We'll try to provide comments to you and ask those questions, but at least you've got to know what's before your and I don't think any of you tonight can say for sure what you're actually being asked to consider. Maybe you can and maybe I don't know.

One little technical comment before I bring some comments on this item, I appeared before the Board of Supervisors yesterday in Sacramento County and asked them if any of them were going to send anyone to this hearing tonight. And they said "Well, we weren't notified of the hearing." And then I asked County Council and asked the County Administrator, well are you aware of

this hearing tomorrow. No, they weren't aware of it either. Now maybe you sent them their material and they just forgot to open the mail or sent it to the wrong department, but I will just advise you that if you failed to notify Sacramento County of this public hearing on your EIR, I think you're going to run into some serious legal problems from the County. I didn't talk to the City, but I certainly hope you notified them.

Regarding the question of . . .

SKAGGS: I could say that at least we try to do EIR's here.

MERAL: Well, now they're persuaded, they should also. Maybe they'll even, who knows they might even do meters next after the hearing we had today. We're with you on that.

SKAGGS: Good to know we have some common ground.

MERAL: I think you ought to take a serious look at the early part. No one has commented tonight on the scenario that's painted in this document about what happens in the Delta if there's a big earthquake. I've been a long time advocate of a serious look at that. I have a thousand page report in my office which is not even mentioned in your study of the likelihood of earthquakes in the Delta, which is very high. But your document fails to understand, and I want each of you to put yourselves in the position of the Governor in the scenario of your own report, that is, a likely catastrophic failure of a lot of levees in the Delta resulting in an inability to pump Delta water. Now your report says that is likely to happen, I agree with your report. It is likely to happen. Your report says, we therefore have to rely on a new source of water because our

aqueduct could be impaired for as much as 13 months. Well that's right. But think about it; if the Delta goes down, as your report says, Contra Costa Water District is out of water that date, three days later. They have a three-day supply as you all are more than painfully aware. That isn't all. So are your neighbors to the south, so is Hayward. By the way, so is most of the South Bay. Do you actually imagine that the Governor of the State is going to sit by and let you slowly meter out your water supply to your customers when they are literally out of water? Obviously not. And so, if you're seriously going to plan for that, as I would urge you to do, you have to seriously plan for taking care of the people around you because they are not going to sit there with no water while you have your supply. That isn't even an argument against Buckhorn plus or minus, its an argument that your report doesn't adequately consider. What you actually paint is a realistic picture. So I think

SKAGGS: It seems like we better have three reservoirs and the American River supply all hooked up.

MERAL: Well, I think the argument is made in that scenario for an earthquake proof pipeline. I really do, because I think you're going to have to have that to supply the people who are going to rely on you for a supply. You and Hetch Hetchy. You are the two that are going to have to supply people. There's one other source of supply that isn't considered because of the supposed narrow connection to Hayward, and that is the ultimate terminal storage, the really important terminal storage for the Bay Area that may or may not be brought to your attention and that's

San Luis Reservoir which is now connected to the Bay Area through the San Felipe Project. It holds 2 million acre feet of water. In a real disaster San Luis Reservoir is going to be the supply for the Bay Area. That 2 millionn acre feet is going to come down here. If you're out of water, if Contra Costa's out of water, you can be sure from the San Felipe Project that you will be supplied water as we in DWR supplied it to Marin through a series of exchanges in the last drought. That is really the terminal storage you're going to have to rely on in a complete disaster, whether you're planning it or not that's where you're going to get the water from. (10)

Just a couple of comments on the basis for the report. For years I've advocated and our organization has advocated more substantial retrofit. In the report you say, gee, its disruptive to go to the people and say you've got-- not necessarily got to-- but we really want you to put in a new toilet because we'll pay for it, please put it in. You report says will people really accept that because its only a response to a one in ten year situation. I don't know. Try a pilot program and see. Pick out a small area, just give it a try. You won't know until you try it and if you want to do something more modest try shower heads. Shower heads aren't even mentioned but they conserve a lot of water too. Just pick some small typical area in your district and give it a try. Then, at least you'll know whether its a realistic possibility. (10)

So far as Woodbridge, I don't know whether it was the timing or what, but, you're proposing as your General Manager pointed

out to take water from the Delta up the Camanche. Good for you. Solve the Fish and Game problems. I don't think they're as bad as was pointed out in your opening presentation. I think you can work with Fish and Game. Believe me, in this administration its amazing what you can do with Fish and Game. But, . . .

SKAGGS: That hasn't been my experience.

11
MERAL: Well it's been ours. But, in any case, I do think you will be successful. For some reason your report fails to consider that alternative even you're out today publicly trying to do it. At least put into your report what your own organization is trying to do. I think it's not a bad alternative. At least put it into the report and consider at the same time taking it just to Woodbridge. You don't have to always go to Camanche. The reasons for doing so, I understand them.

Finally, on the Lower American River. I'm not clear how this report relates to that. The State Water Board's going to come out with their report, we'll see what it says. You should be aware, as your General Counsel will inform you soon, that today California Trout, in the Third District Court of Appeal, won their lawsuit against the City of Los Angeles and basically, seriously in my view, impaired the water rights in the City of Los Angeles due to fish and wildlife concerns. That's undoubtedly going to have an impact on your ultimate litigation and I think you'll want to review that case in the light of your own situation.

Finally, I guess I regret that we're in another dam fight here. But, I don't think its necessary. I personally believe you can find your way around that and I hope you'll seriously

consider alternatives, because as the last speaker pointed out, most dam fights from the point of view that proponents have been lost in the past 15 years-- and you don't really need to join that cause-- the Middle Bar is enough. I'd advise you, if you possibly can, to save the ratepayers the money of going through that again. Thank you.

SKAGGS: Jerry, can we count on you to support us with Fish and Game on that pump-back?

MERAL: Yes, I'd be happy to work with you on that.

SKAGGS: That would be helpful.

BURKE: Ok. Jerry, I'd like to clarify your organization's position on Buckhorn.

MERAL: We don't have one. We haven't considered the Buckhorn reservoir. If its a Lower American River storage project that's a different story.

SKAGGS: We are down to four, folks. Hang in there. Matthew Blumenthal, Donald Forman, Herb Crowle, Mr. Doelle. Ok, we'll put you back in the mix. Is there anybody else who's going to want to speak to us.

MATTHEW BLUMENTHAL: Ok. I'll speak very briefly. I'm a graduate student in history and having studied a little about the history of Bay Area water, I found that anytime they have a water source it gets used. So what's going to happen if we get Buckhorn Canyon is most likely we're going to have expansion and growth to use that water up. So much for your water banking. Also, its a loaded gun, pointing downhill, just waiting for an earthquake to dump it over the downstream areas. And, I don't

think that's going to be really be good for anybody. And so that's all I have to say.

SKAGGS: Thank you. Donald Forman.

FORMAN: At this hour, why don't I . . . (Inaudible)

SKAGGS: All right. Thank you sir. Herb Crowle.

HERB CROWLE: Congratulations Board of Directors for being able to run this four hour marathon. It certainly shows your endurance and stamina. I'm Herb Crowle. I live in San Lorenzo. I've been a resident of the district since 1934 and have been involved professionally in water matters since 1939. My personal expertise has been in water resources and hydrology and in the environmental sciences relating to those matters. You may recall that I recently served as chairman of your Citizens Advisory Committee. For the past ten years I've been a director of the Coalition of Labor and Business, which consists of a large number of organizations which in turn represent thousands of members. I am authorized to speak as a representative of the Coalition.

We have studied the program of East Bay M.U.D. very carefully for several years and we are familiar with the staff report. Our conclusions are, first, you have a great responsibility for meeting the water needs of more than one million people. Due to the foresight and actions of the District's founders and Boards of Directors, including this one so far, East Bay has one of the finest water systems in the world. Second, the very basis of the District has been to serve water of the highest quality and adequate quantity to the people. Third, the population of the District is increasing and will continue to increase both east of

the hills and west of the hills. Fourth, the issues of safety, reliability and quality of the supply to these one million people is of vital importance. Fifth, water from the Delta should not be considered because it is contaminated with salts, pesticides and toxic wastes from agricultural drainage and treated sewage effluent from Sacramento and other cities. (11)

Sixth, and finally, the alternative of additional terminal storage is a very sound measure in terms of protecting the safety, reliability and quality of the water supply. We strongly support the long planned implementation of obtaining water from the Folsom South Canal and the proposed Buckhorn reservoir as a sound protection to the water supply and conservation of cost for the 1.1 million people of the East Bay. Thank you. (6)

SKAGGS: Thank you Mr. Crowle. Mr. Doelle and then Mr. Adams and then we are through, I believe.

ROBERT DOELLE: I feel honored, since I'm the last one.

SKAGGS: Mr. Adams is the last one.

DOELLE: Well. I'm not going to reiterate the statements that I made yesterday to the Board, because I don't feel that it's necessary. But, if there's anyone in the audience that wasn't able to get a copy, if you'll give me your name and address I'll see that you receive a copy.

What I'd like to do is to first all praise you for the work and effort that you did in preparing this summary. Having done these things in the past I can realize the amount of effort that's gone into this. You identified the issues very well. I'm not thoroughly convinced that all the solutions that you've used

here are all the solutions that are available. One of the areas that caught my attention is the position that you've taken in regards to the Sacramento-San Joaquin Delta as not be acceptable from a long term public health standpoint. With desalinization and the use of ozonation infiltration, I'm quite sure that you could overcome those difficulties, and have a very inexpensive form of water. Many of the other issues that I would have liked to have brought up have already been discussed, so there's no sense in touching upon those. But, I did want to share some information with you today that and also clarify a question that was raised yesterday by Mr. Simmons in regards to the energy requirement for desalinization. One thing that I wanted to make very clear is that I made the statement that at \$3.50 a thousand gallons for sea water desalinization that that cost could not be brought down without reduction in energy cost. Well, there are several other factors. One of the major factors is that the cost comes down in terms of salinity at total TDS. So, if you're working with a water of a lower TDS, then of course the cost for energy is much lower and the cost for desalinating is much lower.

13 In the paper, I covered that by making a statement on brackish water that at 40¢ per thousand gallons you could desalinate brackage water. I believe the Delta would be in that category, as well as several other areas in your report. Woodbridge and, let's see what was the other one? Well, the Woodbridge District, the Delta, water reclamation is another example where desalinization for gray water use can be applied. Ultra-filtration. In order to expand upon that I made a copy of my

paper that was given in 1983 in Florence, Italy and I furnished to the Board three copies. That's all that I could make. I gave one to Mr. Brydon and I've got one here.

But, if you'll turn to the analysis of the treatment and take a look at the quality of water that is being treated there, it gives you a pretty good idea of the effectiveness of desalinization in purifying the water. Even to the degree of the TOC's that are running eight to twelve PPM and by the time you get to R0 product, its 1 PPM, with ozonation and filtration that could be reduced down to an negligible amount. The point being made is that you have an opportunity now to diversify your operation and diversify it in a manner to really address all the problems that have been raised here tonight. It's really up to you whether you want to do something like this. I recognize that there's really only one desalinization plant in all of California that's operating on sea water with a permit, and that's the one above Santa Barbara at the Gabelota (?) site that Chevron has. It is the only one. In talking with the public health department the other day, I learned that to the best of their knowledge there's no desalinization plant for any municipality in California. Now this is really a shame because the technology was developed here. There's a number of manufacturing companies in California that could supply your needs and would be providing jobs within the state and that's something that should be considered.

The other factor is that I do know that some bottle companies and beverage companies herein California do use desalinization as a means for preparation of their beverages and final beverage and

final water that's sold to the public. So, there you've got a very good indication of the quality of water that's being made available as a result of desalinization. You can do the same thing. It's just a matter of whether you want to.

The other thing that I wanted to share with you is that the 5 million gallon per day plant was built in Malta is an RO plant and was considered the largest in the world, has now been expanded to some 13 million gallons per day and that plant is being expanded in a modular manner to accommodate the needs on that Island.

SKAGGS: You have well raised the issue of desalinization both yesterday and today and I think we're going to have to ask our staff to give us some information on that. You've submitted written material and probably at this point, both because of the two presentations, but more particularly because its 11:30, you are past the point of the Board being able to absorb it. And--

DOELLE: Ok, you're right.

SKAGGS: We need to issue up and to get it on the table and you've certainly done that.

DOELLE: If you'd like me to come back at some time and share this with you, I'd be very happy to.

SKAGGS: Or you could certainly give any of it in writing to our staff, who ultimately is going to have to look at it; with the exception of Mr. McLean, we are not technical people and so we have to rely on our staff to look at and evaluate ideas such as yours. Even if we were technically competent to do it we probably couldn't do it in this form. But we're not technically competent. At least I'm not.

DOELLE: We-- my services are available to you. I've advanced the state of the art in both desalinization of sea water and brackish water, and I'm recognized in the field. Thank you.

SKAGGS: Thank you sir. Mr. Adams.

SETH ADAMS: Thank you very much for lasting this long, as well as me. I had far greater comments than this and you'll be getting a bunch of comments from us. I'm also a board member of the California Water Policy Group, a group that has a mailing list of about a thousand and has reached about 6,000 people with our educational programs in the past two years. I'd like to congratulate again, the staff for their well-designed environmental impact report draft. Despite the incredible variation in population and growth projections and conservation figures and drop in use after the '76-'77 drought, staff always manages to round out the figures exactly where they want them to be. I can predict that with 100% certainty. As Directors I'd caution you to bear in mind Disraeli's thoughts on lies, damned lies and statistics.

Now, I'd like to talk a little about two other EIR's that I have a great deal of expertise with. I read this EIR some time ago, but I could have read it this morning and presented a lot of the comments which you've heard this evening about the EIR. I'm also working very extensively with the Contra Costa Water District's Los Vaqueros environmental impact report draft, and I've also been working with a very different kind of EIR. The EIR about building 45 homes on the slopes of Mt. Diablo for the Athenian School. By reference the Contra Costa Water District

12 EIR, which is mentioned in your report several times, is the most credible part of your report. The Athenian School report on the other hand is just as extensive as your report about building 45 houses. That should give us some idea of the inadequacies of this report. The Athenian School EIR is as thick as your EIR and covers the subject very well. In total, I'd say that my comments have a lot to do with the fact that lot of your efforts should be spent after the supplement to the EIR on discussing the possibility of strengthening the existing aqueducts and dealing with Delta water for emergency use only.

14 Finally, if you really feel that you must spend hundreds of millions of dollars, spend it on advance treatment. The damage caused by a reservoir at Buckhorn or Los Vaqueros is too much and if you seek an American River supply don't try to conceal the supply or the impacts of the supply in this plan. Put it to a vote or deal with it in a separate EIR entirely. We're wary of the continuing political motivations of Mr. Gilbert and the staff, and think that the politics, profit and personal ambition of these things should be taken out of them and they should be dealt with technically. That's pretty much what I have to say. Thank you for staying this late.

SKAGGS: Thank you. You should be aware the American River project's hardly been concealed. It was decided in the 1960's and the contract was signed in the 1970's and we've been in court since then, so . . .

Anybody else wish to speak? Thank you all for coming. Those of you who were last deserve equal commendation with the Board. Good night.

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MAY 18 1988

OFFICE OF PLANNING

'T PAPER

Satellite Wastewater Reclamation
in the EBMUD Service Area:
An Alternative Water Source for
Large Irrigators

D R A F T

Prepared By:

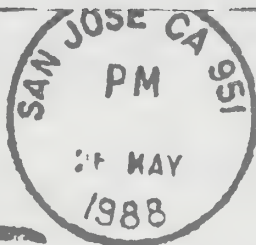
Dana K. Ripley
Allied Engineers, Inc.
3000 Executive Parkway, Suite 112
San Ramon, CA 94583
(415) 867-4646

May 16, 1988

Summary

1. Large-volume exterior water demand for parks, golf courses, cemeteries, and freeway medians is approximately 20 MGD in the EBMUD service area.
2. Providing reclaimed wastewater to most of these end users from regional wastewater treatment plants is not feasible due to the cost of transmission lines from the regional plants to the point of use.
3. Satellite reclamation plants located near the place of use have been recognized by the California Department of Water Resources as a solution to this problem.
4. Where sufficient wastewater is available near a large volume water user, a satellite reclamation plant can be constructed to treat the wastewater to the quality necessary for reuse at that site. Solids from the plant can be returned to the sewer to avoid the need for sludge processing facilities. The plant can also be shut down during the winter months when irrigation is at a minimum.
5. The cost of satellite reclamation plants compares favorably with alternative projects under consideration by EBMUD to increase the available water supply. The operating costs are more than offset by the volume charges for the water. The capital costs are less than the System Capacity Charge for use of a comparable quantity of water.
6. Contacts made with large-volume water users in the EBMUD service area indicate a high level of interest in this concept, since it provides a secure supply of water in dry years.
7. We recommend that EBMUD investigate the feasibility of this concept and initiate plans for a demonstration project at a favorable site.

ONIA CHATTY
18216 A HALE AVE
Morgan Hill, CA
95037-3508
(415) 853-6571
Dawn Chetty



Public Hearing - Water Plan
East Bay Municipal Utility District
2130 Adeline, P.O. Box 24055
Oakland, CA 94623

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Dear Sirs / Madame,
May 25, 88

I could not attend the public hearing which dealt with the new reservoir for EBMUD. I strongly support a new large dam/reservoir because of the need to serve the East Bay Public, as the population grows, as too, does the need for infrastructure improvements. This is a classic example. Because of the moderately lower rainfall this year EBMUD is facing a drought and water rationing. This affects us as far away as Santa Clara County because we too get our water from Hitch Hetchy. This water plan, including the reservoir will not cause serious environmental consequences -- in fact, it will help the environment by providing more water surface area for plants, wildlife, and recreation uses (for humans!) I don't believe the study adequately addresses the beneficial impact of the water plan on the whole bay area, not just East Bay.

Secondly, I feel it is critically important not only to have the plan but also a legal framework to implement it. That means state legislation should be initiated to ensure that when environmentalists sue to stop it, they must present a bond for the cost of the delay. We need the reservoir - Now. Omar

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COLLEGE OF NATURAL RESOURCES
AGRICULTURAL EXPERIMENT STATION
GIANNINI FOUNDATION OF AGRICULTURAL ECONOMICS
DEPARTMENT OF AGRICULTURAL & RESOURCE ECONOMICS

207 GIANNINI HALL
BERKELEY, CALIFORNIA 94720

5/26/88

Richard L. Kolm
Assistant Chief Engineer
EBMUD
P.O. Box 24055
Oakland, CA 94623

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MAY 31

OFFICE OF P.

Dear Mr. Kolm,

Enclosed are a copy of my remarks before the Board on the Draft EIR for the Water Management Program. I do not see how the economic analysis contained in the EIR could possibly support an informed decision by the Board and I urge the District to provide realistic estimates of the economic costs of a true set of alternatives.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Peter Berck".

Peter Berck
Associate Professor

Comments on Draft EIR
Water Supply Management Program
of East Bay MUD

by
Peter Berck¹

1. The costs for the various alternatives are not comparable. A terminal reservoir would have the capacity to provide about 80 MGD for one year for security purposes or 40 MGD for each of two years for drought purposes; A new pipeline across the delta would provide 325 MGD for security purposes and no additional water in a drought. Thus a new pipeline is not an alternative; it wildly overfulfills one program goal and makes no contribution to another. Intertie alternatives stated in the report are similarly noncomparable: they are not sized in the 40 - 80 MGD range and without a plan for an additional 40 MGD they are not an alternative.

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2. The stated costs for the alternatives do not include the operating costs or benefits. A new pipeline would require maintenance but would save the maintenance and upgrading of the replaced pipelines. These costs could materially change the desirability of this option. A terminal storage facility has significant evaporation in all years and requires maintenance, both of which should be counted as part of its costs. A toilet replacement program would eliminate the need to treat significant amounts of effluent, which is an unaccounted for benefit.

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3. Costs and benefits that happen at different times should be compared as present values. Maintenance and replacement costs should be properly discounted when included. In the case of toilet replacement, it is the present value of a 30-year replacement program that is of interest, not simply current cost. Such a program would also have lower operating costs--in fact, it might save significant sewer charges--than a storage facility and these savings should be discounted, too.

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4. The alternatives to develop additional supply should include the purchase or exchange of water rights. According to the technical report, figure III-19 agricultural users of the Mokelumne used over 60,000 acre ft in even the driest of years. Figuring only half of that as consumptive use, still leaves 30,000 acre ft that could be purchased only in dry years. Based on the report "Water Trading" by the Assembly Office of Research, February 1985, and the similarity of the Mokelumne watershed to that of the Tuolumne, it would seem that something like 6,000 acre ft should be available at about \$75/ acre foot. During the last drought, there were reports of water being sold in the Westlands Water District at \$100/ acre ft.

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¹Department of Agricultural and Resource Economics, University of California, Berkeley

Costs of such a standby agreement should be minimal to the district. The Metropolitan Water District is currently negotiating with the Palo Verde water district for dry year only supply, so such agreements are considerable.

5. Alternatives utilizing a Hetch Hetchy intertie and the purchase of dry year only rights on the Tuolumne ought to be considered. Here the Assembly office of Research Report is directly applicable. Even considering just the consumptive use, 75,000 acre/ft might well be purchased on this watershed on a dry years only basis for very little money.

6. Combinations of conservation measures, purchase of dry year water rights, pumping water from the delta to Commanche, upgrading some of the aqueduct, utilizing the intertie through the city of Hayward, etc may well provide the most satisfactory solution. Planning on a single project solving the entire putative 40 MGD deficit is likely to be more damaging to the districts ratepayers and environment than necessary.

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MAY 31 1988

SECRETARY'S OFFICE

Dear ~~Mr.~~ Mr. Skaggs -

I attended the EBMUD Public Hearing on Buckhorn Reservoir last night. While most in the audience, like myself, opposed new reservoir construction, I believe the most important comments were on the EIR, not the dam itself. The EIR that your staff has prepared is clearly problematic and should not be used as the basis of an informed decision. I urge you to order a new EIR that seriously considers alternatives.

Sincerely, Jeremy Roschelle

19

Steven P. Meyers
1609 Virginia St.
Berkeley, CA 94703

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SECRETARY'S OFFICE

May 27, 1988

EDMUD Board
P.O. Box 24055
Oakland, CA 94623

Re: Draft Water Management Plan & Buckhorn Canyon Reservoir

I attended the public hearing on May 25 but did not have an opportunity to speak. I would like to express my concern that the draft plan does not adequately compare the costs and benefits of the alternatives that do exist. Our good mountain water is too precious to be used as carelessly as it is. EDMUD should take a stronger role in educating its consumers about the reality of living in a dry area.

EDMUD should assess the costs and benefits of a truly aggressive water demand management program. I believe that this would be a more beneficial option than spending \$150-\$200 million to flood beautiful Buckhorn Canyon. If we have to drink a little Delta water in an emergency, this is not a catastrophe.

Sincerely,



Steve Meyers

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OFFICE OF PLANNING

May 30, 1988

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JUN - 1 1988

SECRETARY'S OFFICE

Board of Directors EBMUD:
PO Box 24055
Oakland.

Dear People:

I was away and not able to attend the public hearing on your water supply management program, so I would like to know why EBMUD has not been considering less costly alternatives to the flooding of Buckhorn Canyon, and why you are continuing to annex new lands to your service area for the benefit of developers whose greed will threaten our Greenbelt.

I would appreciate you sending me a copy of your "Summary and Environmental Impact Report".

Yours sincerely

Mrs Arthur Burch

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JUN 01 1988

OFFICE OF PLANNING

3228 Helen Street
Oakland CA 94608
May 26, 1988

Richard Kolm
Ass't Chief Engineer for Planning
EBMUD
PO Box 24055
Oakland CA 94623

Dear Mr. Kolm,

I am a director of the California Water Policy Group. I have an undergraduate degree in geology, a masters degree in Engineering Geoscience and am currently a practicing geophysicist. The following are my comments on the Water Supply Management Plan draft EIR.

Geology Of Proposed Buckhorn Reservoir Site

The EIR on page 5-3 describes the preferred location of the aqueduct tunnel at the proposed Buckhorn reservoir. The tunnel is shown as passing through a rock formation called the Claremont formation. Other locations for the tunnel require crossing up to four geologic units and a fault. Good principles of site selection for such tunnels make a single geologic unit preferable. However the selected Claremont unit is made of thin layers of chert and shale. Most Bay Area geology students, and I was one, are assigned to the task of mapping the East Bay Hills. In that process, while scratching our poison oak, we found the Claremont formation appearing in steeply dipping beds with the shale being crumbly and weak.

Although the dip of the beds at the tunnel site doesn't appear on the geological map in the EIR, the map shows the dip of those beds to the south of the reservoir as 70 degrees. Geologic literature on the hills describes the Claremont formation, as having an incompetent shale member subject to creep and fracture by gravitational force alone, accentuated by the dip of the beds.

Basic geotechnical engineering literature describing site selection criteria for aqueduct tunnels discourages locating in shales. Shales are often weak and may flow into the tunnel. Such risks are a serious omission from the EIR which indicates more concern with building the reservoir than clearly evaluating relevant information.

Choosing a costly, yet risky structural solution (which may lead to even more costly problems) is not the conscionable way to eliminate drought shortages. Other, better alternatives exist. A combination of improved conservation efforts, reclamation, and use of a Delta water blend for emergencies is better.

Conservation

Page 7-14 of the EIR lists conclusions with respect to conservation. The 5th conclusion states that the perception of availability of adequate supplies of water is necessary in order to maintain a strong economy. It claims that aggressive conservation measures are not likely to have a positive effect on the economy. I wondered why more aggressive conservation measures weren't taken and whether concerns about economic growth are the reason. I'd like to dispel the myth and make a recommendation. I have spent substantial time studying earthquake prediction as well as economic influences on public education and regulation related to earthquakes. Despite pressures from the business community against regulation, homes cannot legally be sold near geologic risk, without the prospective buyer being informed. The Bay Area is well-known for its seismic risk, and homebuyers are now being told about them. Such regulation has had no noticeable effect Bay Area economic health.

With that in mind, I suggest that potential homebuyers particularly in arid regions of the district, be informed of the period need to enforce drought measures. The recent publicity of Contra Costa residents' frustration with endangering their costly landscaping can be largely attributed to EBMUD's wishy-washy position on conservation. For years the District's line provided little public awareness of water as a limited resource. That negligence leads only to confusion, ignorance and a very weak commitment to conservation.

Mokelumne Aqueduct

EBMUD staff has recommended terminal storage to offset earthquake risk to the Mokelumne Aqueduct. They justify the size of the terminal storage needed by approximating a 13-month, worst case aqueduct outage. At a recent presentation to a local association chapter of civil engineers, EBMUD engineer Richard Kolm said that the 13-month figure was the time needed for complete reconstruction of the aqueduct. When I asked Mr. Kolm about the time needed for temporary emergency construction, I was told about delays in the delivery of pipe of that size, and about the difficulties of doing construction work from a barge. I acknowledge both those problems but I still wasn't given an answer to the time it would take for an emergency solution. I did run into a senior EBMUD engineer in the BART station after that presentation and he responded to my question. He estimated that there was a 6-month temporary solution which would satisfy 40% of the District's demand. Although the train came before I got the opportunity to hear more about this engineer's temporary solution, I think the public and the District's directors should be given a more detailed picture of the possibilities in the EIR, so that they can better evaluate the real available supply and can make well-informed recommendations and decisions.

It seems prudent to continue to study methods of building an aqueduct support structure that can survive a large earthquake and I'm not convinced that it will require an entirely new and huge additional pipeline.

Conclusion

In conclusion, I will reiterate my major points:

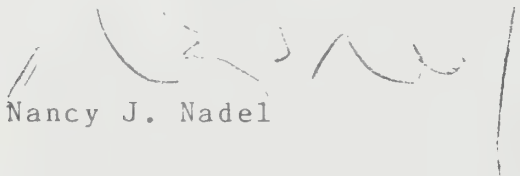
- * Don't accept costly and structurally shakey reservoir solutions when better alternatives exist for the District's drought risk problems.

- * Intensify conservation measures and the adult public's awareness of their importance. There is no justification that such efforts will endanger regional economic health.

- * Urge staff to give you the full picture on the time needed for emergency repairs to the Mokelumne Aqueduct before you evaluate whether you need a new large terminal reservoir, and proceed with studying methods to strengthen the aqueduct against large seismic events.

Thank you for this opportunity to share my perspective on the Program.

Sincerely yours,



Nancy J. Nadel



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PLANNING DEPARTMENT

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JUN 06 1988

June 2, 1988

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JUN 03 1988

OFFICE OF PLANNING

Richard L. Kolm
Asst. Chief Engineer for Planning
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

Re: Water Supply Management Program - Technical Report and Draft
Environmental Impact Report

Dear Mr. Kolm:

The City of Alameda agrees with the Water Supply Management Program objectives of security against floods and earthquakes, supply to meet dry year demands and maintain high quality water, and understand that water is a precious resource which should be managed to the best of our ability.

However, we are concerned about the proposal of a new major terminal reservoir as the solution to the water supply problems. The Draft EIR points out that "The only element of the WSMP that could produce significant adverse environmental effects are the terminal reservoirs." We concur with the possible environmental effects identified in the EIR regarding reservoirs and believe that the document should elaborate more on the alternatives to the WSMP. The expanded evidence would assist in determining if the additional terminal storage facility is the appropriate solution to anticipated problems.

Specifically, we believe additional evidence is needed on the feasibility and cost of alternatives such as water marketing, enhanced water conservation and reclamation, interties with other water districts, and the use of Delta water in emergency situations and as the backup supply for serious droughts. We also question whether it is in the best interest of Alameda and other communities within the EBMUD service area for the District to be contemplating additional annexation to the service area.

Finally, we would be interested in knowing more about the estimated time to repair the Mokelumne Aqueduct in the event of Delta flooding or earthquake. Can that timetable be shortened through advance planning, stockpiling of materials, and using 7 day work week scheduling rather than 5 day work week scheduling?

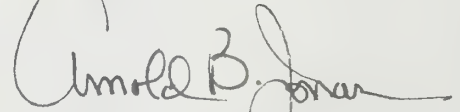
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Lastly, we thank you for the opportunity to comment on the proposed program and associated EIR. Our contact person is Lida Budko, Assistant Planning Director.

Sincerely,

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Arnold B. Jonas
Planning Director

ABJ:LB:lm

RECEIVED

JUN 11 1988

OFFICE OF PLANNING

Post Office Box 172
Lafayette, CA. 94549
3 June 1988

East Bay Municipal Utility District (EBMUD)
Mr. Richard L. Kolm,
Assistant Chief Engineer for Planning
2130 Adeline Street
Oakland, CA. 94623

Dear Sir:

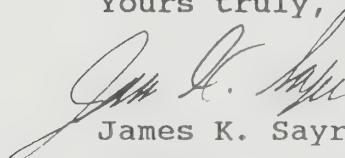
RE: Comments on Water Supply Management Program (WSMP) -
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deficient and fails to meet the standards of the California
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EBMUD service area.
2. obviously, there are both physical and economic limits to
growth, limited supply of usable land, acceptable densities of
population, traffic congestion, air pollution, economic bases
for employment, and available water supply.
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in population between now and the year 2020 and indefinitely
into the future from there.
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semi-arid environment, human population must depend on water
being brought in from the mountain areas.
5. This water supply from the mountains is a finite, limited
and naturally variable resource.

6. It is obvious that only a certain human population can be supported by this limited natural water supply. The sooner EMBUD faces these natural facts, the better off we will all be.
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8. If EBMUD creates a permanent water pricing structure with penalties for heavy use, by increasing the price per gallon as usage increases, then we will see a permanent decrease in the marginal demand for water
9. The construction of additional reservoirs within the EBMUD service area for the avowed purpose of "security" for a hypothetical aqueduct break caused by a major earthquake or for the purpose of lessening the severity of water rationing during a ten-year drought will mainly serve as a growth inducement for the development of more housing and businesses.
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11. Therefore, there is no need for EBMUD to go on providing water hookups for new housing/business developments within its service area.
12. Buckhorn Canyon is the most beautiful unspoiled area within land owned by EBMUD.
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14. The flooding of the Grand Canyon of the Tuolumne River in Yosemite National Park by the Hetch Hetchy Reservoir by the City of San Francisco is an example of human greed overcoming good sense.
15. There is no need for EBMUD to repeat the mistake of San Francisco in flooding a valley in a national park by its own idea of flooding Buckhorn Canyon south of Moraga.

Yours truly,


James K. Sayre
Chairman,
Ecology Action

RECEIVED

June 3, 1988

JUN 7 1988

SECRETARY'S OFFICE

The Editor
Contra Costa Sun
3678 Mt. Diablo Boulevard
Lafayette, California 94549

Dear Ms. Putnam:

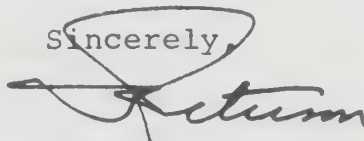
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The audiences at such meetings are notoriously biased. If, as your article implies, the EBMUD Board intends to make their decision "based on public comment" rather than on technical analysis, then they should put the issue on the November ballot so that everyone can be involved. Alternatively, they should retain a professional public opinion survey firm to conduct a poll of a truly representative cross-section of their ratepayers. If the ratepayers at large were asked whether they would be willing to sacrifice the "scenic beauty" of Buckhorn Canyon in order to obtain a secure, reliable supply of high quality water, there is no doubt in my mind the response overwhelmingly would be "YES".

I note in conclusion that the East Bay Regional Park District provides a scenic overlook at the top of Wildcat Canyon Road, at the entrance to Tilden Park. This is to permit the public to obtain a better view of the sweeping vistas of San Pablo and Briones Reservoirs.

Sincerely,



John A. Peterson

cc: EBMUD Board Members

18 Camino Sobrante
Orinda, California 94563

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

6/4/88

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JUN 7 1988

SECRETARY'S OFFICE

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

☒ YES, for Buckhorn or Los Vaqueros reservoir,

and

☒ NO, to unfair rationing where the burden is not equally shared by all customers,

and

☒ NO, to an increasing block rate structure.

Very truly yours,

☒ NO to rationing as an
element of year-to-year
planning, we need
adequate supplies all the
time. TOO MANY MILLIONS
are lost during rationing!

Robert R. Tuttle
SIGNED

ROBERT R. TUTTLE
750 MORNINGHOME ROAD
DANVILLE, CA 94526

ONIA CHATTY
18216 A HALE AVE
Morgan Hill, CA
95037-3508
(415) 853-6571
Onia Chatty



Public Hearing - Water Plan
East Bay Municipal Utility District
2130 Adeline, P.O. Box 24055
Oakland, CA 94623

© USPS 1987

Dear Sirs / Madams,

May 25, 88

I could not attend the public hearing which dealt with the new reservoir for EBMUD. I strongly support a new large dam/reservoir because of the need to serve the East Bay Public. As the population grows, so, too, does the need for infrastructure improvements. This is a classic example. Because of the moderately low rainfall this year EBMUD is facing a drought and water rationing. This affects us as far away as Santa Clara County because we, too, get our water from Hetch Hetchy. This water plan, including the reservoir will not cause serious environmental consequences -- in fact, it will help the environment by providing more water surface area for plants, wildlife, and recreation uses (for humans!). I don't believe the study adequately addresses the beneficial impact of the water plan on the whole bay area, not just East Bay.

Sincerely, I feel it is critically important not only to have the plan but also a legal framework to implement it. That means state legislation should be initiated to ensure that when environmentalists "give to stop it, they must present a bond for the cost of the delay. We need the reservoir - now. Onia

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UNIVERSITY OF CALIFORNIA

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SANTA BARBARA • SANTA CRUZ

COLLEGE OF NATURAL RESOURCES
AGRICULTURAL EXPERIMENT STATION
GIANNINI FOUNDATION OF AGRICULTURAL ECONOMICS
DEPARTMENT OF AGRICULTURAL & RESOURCE ECONOMICS

207 GIANNINI HALL
BERKELEY, CALIFORNIA 94720

5/26/88

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MAY 31

OFFICE OF

Richard L. Kolm
Assistant Chief Engineer
EBMUD
P.O. Box 24055
Oakland, CA 94623

Dear Mr. Kolm,

Enclosed are a copy of my remarks before the Board on the Draft EIR for the Water Management Program. I do not see how the economic analysis contained in the EIR could possibly support an informed decision by the Board and I urge the District to provide realistic estimates of the economic costs of a true set of alternatives.

Very truly yours,

Peter Berck
Associate Professor

Comments on Draft EIR
Water Supply Management Program
of East Bay MUD

by
Peter Berck¹

1. The costs for the various alternatives are not comparable. A terminal reservoir would have the capacity to provide about 80 MGD for one year for security purposes or 40 MGD for each of two years for drought purposes; A new pipeline across the delta would provide 325 MGD for security purposes and no additional water in a drought. Thus a new pipeline is not an alternative; it wildly overfulfills one program goal and makes no contribution to another. Intertie alternatives stated in the report are similarly noncomparable: they are not sized in the 40 - 80 MGD range and without a plan for an additional 40 MGD they are not an alternative.

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2. The stated costs for the alternatives do not include the operating costs or benefits. A new pipeline would require maintenance but would save the maintenance and upgrading of the replaced pipelines. These costs could materially change the desirability of this option. A terminal storage facility has significant evaporation in all years and requires maintenance, both of which should be counted as part of its costs. A toilet replacement program would eliminate the need to treat significant amounts of effluent, which is an unaccounted for benefit.

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3. Costs and benefits that happen at different times should be compared as present values. Maintenance and replacement costs should be properly discounted when included. In the case of toilet replacement, it is the present value of a 30-year replacement program that is of interest, not simply current cost. Such a program would also have lower operating costs--in fact, it might save significant sewer charges--than a storage facility and these savings should be discounted, too.

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4. The alternatives to develop additional supply should include the purchase or exchange of water rights. According to the technical report, figure III-19 agricultural users of the Mokelumne used over 60,000 acre ft in even the driest of years. Figuring only half of that as consumptive use, still leaves 30,000 acre ft that could be purchased only in dry years. Based on the report "Water Trading" by the Assembly Office of Research, February 1985, and the similarity of the Mokelumne watershed to that of the Tuolumne, it would seem that something like 6,000 acre ft should be available at about \$75/ acre foot. During the last drought, there were reports of water being sold in the Westlands Water District at \$100/ acre ft.

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¹Department of Agricultural and Resource Economics, University of California, Berkeley

Costs of such a standby agreement should be minimal to the district. The Metropolitan Water District is currently negotiating with the Palo Verde water district for dry year only supply, so such agreements are considerable.

5. Alternatives utilizing a Hetch Hetchy intertie and the purchase of dry year only rights on the Tuolumne ought to be considered. Here the Assembly office of Research Report is directly applicable. Even considering just the consumptive use, 75,000 acre/ft might well be purchased on this watershed on a dry years only basis for very little money.

6. Combinations of conservation measures, purchase of dry year water rights, pumping water from the delta to Commanche, upgrading some of the aqueduct, utilizing the intertie through the city of Hayward, etc may well provide the most satisfactory solution. Planning on a single project solving the entire putative 40 MGD deficit is likely to be more damaging to the districts ratepayers and environment than necessary.

RECEIVED

MAY 31 1988

SECRETARY'S OFFICE

Dear ~~Mr.~~ Mr. Skaggs -

I attended the EBMUD Public Hearing on Buckhorn Reservoir last night. While most in the audience, like myself, opposed new reservoir construction, I believe the most important comments were on the EIR, not the dam itself. The EIR that your staff has prepared is clearly problematic and should not be used as the basis of an informed decision. I urge you to order a new EIR that seriously considers alternatives.

Sincerely, Jeremy Roxhelle

Steven P. Meyers
1609 Virginia St.
Berkeley, CA 94703

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JUN 01 1988

OFFICE OF PLANNING

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JUN - 1 1988

SECRETARY'S OFFICE

May 27, 1988

EDMUD Board
P.O. Box 24055
Oakland, CA 94623

Re: Draft Water Management Plan & Buckhorn Canyon Reservoir

I attended the public hearing on May 25 but did not have an opportunity to speak. I would like to express my concern that the draft plan does not adequately compare the costs and benefits of the alternatives that do exist. Our good mountain water is too precious to be used as carelessly as it is. EDMUD should take a stronger role in educating its consumers about the reality of living in a dry area.

EDMUD should assess the costs and benefits of a truly aggressive water demand management program. I believe that this would be a more beneficial option than spending \$150-\$200 million to flood beautiful Buckhorn Canyon. If we have to drink a little Delta water in an emergency, this is not a catastrophe.

Sincerely,



Steve Meyers

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JUN 01 1988

OFFICE OF PLANNING

May 30, 1988

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JUN - 1 1988

SECRETARY'S OFFICE

Board of Directors EBMUD:
PO Box 24055
Oakland.

Dear People:

I was away and not able to attend the public hearing on your water supply management program, so I would like to know why EBMUD has not been considering less costly alternatives to the flooding of Buckhorn Canyon, and why you are continuing to annex new lands to your service area for the benefit of developers whose greed will threaten our Greenbelt.

I would appreciate you sending me a copy of your "Summary and Environmental Impact Report".

Yours sincerely

Mrs Arthur Burch

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JUN 01 1988

OFFICE OF PLANNING

3228 Helen Street
Oakland CA 94608
May 26, 1988

Richard Kolm
Ass't Chief Engineer for Planning
EBMUD
PO Box 24055
Oakland CA 94623

Dear Mr. Kolm,

I am a director of the California Water Policy Group. I have an undergraduate degree in geology, a masters degree in Engineering Geoscience and am currently a practicing geophysicist. The following are my comments on the Water Supply Management Plan draft EIR.

Geology Of Proposed Buckhorn Reservoir Site

The EIR on page 5-3 describes the preferred location of the aqueduct tunnel at the proposed Buckhorn reservoir. The tunnel is shown as passing through a rock formation called the Claremont formation. Other locations for the tunnel require crossing up to four geologic units and a fault. Good principles of site selection for such tunnels make a single geologic unit preferable. However the selected Claremont unit is made of thin layers of chert and shale. Most Bay Area geology students, and I was one, are assigned to the task of mapping the East Bay Hills. In that process, while scratching our poison oak, we found the Claremont formation appearing in steeply dipping beds with the shale being crumbly and weak.

Although the dip of the beds at the tunnel site doesn't appear on the geological map in the EIR, the map shows the dip of those beds to the south of the reservoir as 70 degrees. Geologic literature on the hills describes the Claremont formation, as having an incompetent shale member subject to creep and fracture by gravitational force alone, accentuated by the dip of the beds.

Basic geotechnical engineering literature describing site selection criteria for aqueduct tunnels discourages locating in shales. Shales are often weak and may flow into the tunnel. Such risks are a serious omission from the EIR which indicates more concern with building the reservoir than clearly evaluating relevant information.

Choosing a costly, yet risky structural solution (which may lead to even more costly problems) is not the conscionable way to eliminate drought shortages. Other, better alternatives exist. A combination of improved conservation efforts, reclamation, and use of a Delta water blend for emergencies is better.

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Conservation

Page 7-14 of the EIR lists conclusions with respect to conservation. The 5th conclusion states that the perception of availability of adequate supplies of water is necessary in order to maintain a strong economy. It claims that aggressive conservation measures are not likely to have a positive effect on the economy. I wondered why more aggressive conservation measures weren't taken and whether concerns about economic growth are the reason. I'd like to dispel the myth and make a recommendation. I have spent substantial time studying earthquake prediction as well as economic influences on public education and regulation related to earthquakes. Despite pressures from the business community against regulation, homes cannot legally be sold near geologic risk, without the prospective buyer being informed. The Bay Area is well-known for its seismic risk, and homebuyers are now being told about them. Such regulation has had no noticeable effect Bay Area economic health.

With that in mind, I suggest that potential homebuyers particularly in arid regions of the district, be informed of the period need to enforce drought measures. The recent publicity of Contra Costa residents' frustration with endangering their costly landscaping can be largely attributed to EBMUD's wishy-washy position on conservation. For years the District's line provided little public awareness of water as a limited resource. That negligence leads only to confusion, ignorance and a very weak commitment to conservation.

Mokelumne Aqueduct

EBMUD staff has recommended terminal storage to offset earthquake risk to the Mokelumne Aqueduct. They justify the size of the terminal storage needed by approximating a 13-month, worst case aqueduct outage. At a recent presentation to a local association chapter of civil engineers, EBMUD engineer Richard Kolm said that the 13-month figure was the time needed for complete reconstruction of the aqueduct. When I asked Mr. Kolm about the time needed for temporary emergency construction, I was told about delays in the delivery of pipe of that size, and about the difficulties of doing construction work from a barge. I acknowledge both those problems but I still wasn't given an answer to the time it would take for an emergency solution. I did run into a senior EBMUD engineer in the BART station after that presentation and he responded to my question. He estimated that there was a 6-month temporary solution which would satisfy 40% of the District's demand. Although the train came before I got the opportunity to hear more about this engineer's temporary solution, I think the public and the District's directors should be given a more detailed picture of the possibilities in the EIR, so that they can better evaluate the real available supply and can make well-informed recommendations and decisions.

It seems prudent to continue to study methods of building an aqueduct support structure that can survive a large earthquake and I'm not convinced that it will require an entirely new and huge additional pipeline.

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Conclusion

In conclusion, I will reiterate my major points:

- * Don't accept costly and structurally shakey reservoir solutions when better alternatives exist for the District's drought risk problems.

- * Intensify conservation measures and the adult public's awareness of their importance. There is no justification that such efforts will endanger regional economic health.

- * Urge staff to give you the full picture on the time needed for emergency repairs to the Mokelumne Aqueduct before you evaluate whether you need a new large terminal reservoir, and proceed with studying methods to strengthen the aqueduct against large seismic events.

Thank you for this opportunity to share my perspective on the Program.

Sincerely yours,


Nancy J. Nadel



CITY OF ALAMEDA • CALIFORNIA

CITY HALL • SANTA CLARA AT OAK STREET 94501 • (415) 522-4100

PLANNING DEPARTMENT

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JUN 02 1988

June 2, 1988

OFFICE OF PLANNING

RECEIVED

JUN 03 1988

OFFICE OF PLANNING

Richard L. Kolm
Asst. Chief Engineer for Planning
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

Re: Water Supply Management Program - Technical Report and Draft
Environmental Impact Report

Dear Mr. Kolm:

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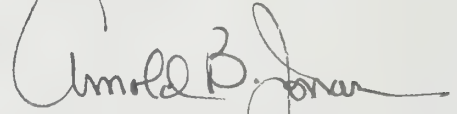
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Arnold B. Jonas
Planning Director

ABJ:LB:lm

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JUN 08 1988

OFFICE OF PLANNING

Post Office Box 172
Lafayette, CA. 94549
3 June 1988

East Bay Municipal Utility District (EBMUD)
Mr. Richard L. Kolm,
Assistant Chief Engineer for Planning
2130 Adeline Street
Oakland, CA. 94623

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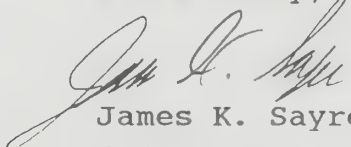
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Yours truly,



James K. Sayre

Chairman,

Ecology Action

RECEIVED

June 3, 1988

JUN 7 1988

SECRETARY'S OFFICE

The Editor
Contra Costa Sun
3678 Mt. Diablo Boulevard
Lafayette, California 94549

Dear Ms. Putnam:

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Sincerely,



John A. Peterson

cc: EBMUD Board Members

18 Camino Sobrante
Orinda, California 94563

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

6/4/88

RECEIVED

JUN 7 1988

SECRETARY'S OFFICE

Dear Board Members:

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and

☒ NO, to unfair rationing where the burden is not equally shared by all customers,

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Very truly yours,

☒ NO to rationing as an
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adequate supplies all the
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ARE LOST DURING RATIONING!

Robert R. Tuttle
SIGNED

ROBERT R. TUTTLE
750 MORNINGHOME ROAD
DANVILLE, CA 94526

WATER TREATMENT

JUN 07 1988

DIVISION

East Bay Utility
East Bay Area
2130 Adeline
Oakland, California

May 1, 1988 Wednesday

Ladies and Gentlemen,

I am referring to
Mr. Paul Gorman to you. He works
at Illinois Institute of Technology
and may be able to help with our
water problem. Something about
turning salt water to fresh.

Yours truly,

Cecilia Foster Oakland

RECEIVED

JUN 08 1988

RESOURCES PLANNING DIVISION

RECEIVED

JUN 8 1988

SECRETARY'S OFFICE

3486 Springhill Court
Lafayette CA 94549
June 6, 1988

Board of Directors
East Bay Municipal Utility District
P.O. Box 24055
Oakland CA 94623

I am responding to the current water shortage, and the method you are using to allot water usage in an unfair manner. Since your system is divided into seven districts with a representative in each district, there should be a separate allotment for each of the districts. It certainly makes sense that an area of warmer climate and larger lots deserves more water than your "so-called fair manner" in which it is being done-- but since your decision has been made and you have not listened to the opposition, this brings up the second point: future water storage. (3)

Again, there is so-called opposition to the Buckhorn reservoir, and it appears you are going to let this stop a plan which you say is severely needed to insure future water supplies as there has been no additional storage provided over the past 10 to 12 years. When are you going to stand behind your own recommendations and responsibilities to the public and provide us with the water that is required?

It is essential that Buckhorn reservoir be built to ensure our future water supplies. I hope we do not have a repeat of the situation which forces customers to take sides as to who is entitled to what and how much, which has created bad feelings all the way around. (4)

Let's build Buckhorn now and get the job done.

Sincerely,



John R. Tulley

RECEIVED
JUN 12 1988
OFFICE OF PLANNING

1288 Rimer Drive,

Moraga, CA 94556 JUN 9 1988

RECEIVED
SECRETARY'S OFFICE

June 7, 1988

Moraga Town Council

Re: Public Hearing on Buckhorn Reservoir - June 8th

Dear Members of the Council,

Unfortunately, due to previous out of town arrangements we have been unable to attend earlier Public Hearings on the EIR produced by EBMUD regarding their proposed reservoir. We would like this letter to become part of the record of your meeting on June 8, 1988.

We acknowledge the need for concern by EBMUD as to future water needs of the District but believe their approach amounts to overkill or a cover up for their longer term approval and expansion of the district's territory. (24)

From a purely environmental point of view, we feel that the selection of Buckhorn as the site for an enormous reservoir creates the most devastation and impact by its location on the most beautiful scenic area of all those under consideration. It will result in the permanent loss of a very large area of unspoiled wooded and open countryside, far more beautiful than any of the other sites under consideration. (22)

Having studied the complete EIR, we raise the following questions:

(1) Would the long term benefit to Moraga and central Contra Costa County support the 2-4 years of disturbance, disruption of our daily lives, damage and destruction of our local streets and environment? (19)

(2) The report states that "local climate in the vicinity of the reservoir may be slightly altered....temperature differences could be as much as 5°F (see pg 5-126). It is a known fact that large bodies of water create climatic changes (20)

(3) The cost of \$152 million to construct Buckhorn is based on 1988 prices with no cost of living inflation factor (see pg 5-6) (15)

(4) No mention is made of earthquake safety or flood control at Buckhorn, although on page 5-6 and 5-32 spillway capacity at Pinole and Los Vaqueros is projected capable of handling 1-1,000 year flood. No similar numbers or projections are given for Buckhorn. (21)

Cont'd....

(5) Air quality would be affected during the four year construction period - from dust, carbon monoxide from vehicles to brush burn off (see page 5-127). While the EIR suggests mitigating measures such as limited truck speeds on dirt roads, covering haul trucks to prevent dust and falling debris, implementation and enforcement would be difficult and costly and who would be responsible for monitoring these measures? Although the reports states that work would be done during normal working hours, it also states that doubling up on shifts would be expected. From our personal observation recently, dump trucks hauling fill between Orinda and Briones Reservoir was neither considerate of local traffic, hikers and equestrians and was being conducted on a Saturday and Sunday. Who bears the cost of local enforcement? Moraga, San Leandro, Castro Valley, EBMUD?

IF a new sixth reservoir is needed solely as a precautionary safeguard against such emergencies as a break in the aquaduct or a long term drought, why is the District proposing a reservoir capable of storing 145,000 acre feet (more than double the present storage capacity), at a cost far exceeding any other solution and in a location which would not serve the largest area of the District, i.e. Central and Eastern Contra Costa?

Building the largest reservoir possible does not support the need for or enhance the effort to enforce conservation through regulation (i.e. new building/plumbing regulations etc.)

Since this EIR does not include the Los Vaqueros reservoir it is not possible to analyse the cost/benefit ratio of bringing Mokelumne water to that location, thus upgrading that stored water besides sharing the cost of building that facility. Nor does this report take into account the acceptance by water consumers of a limited time use of lesser quality water, nor does it compare the lower costs involved in upgrading Delta water during any future emergency.

What evidence is there to support the view that consumers would rather see EBMUD embarking on any of the proposed reservoir projects rather than accept a temporary reduction in the quality of the water supply during an emergency break in the aquaduct?

Finally, on pages 4-2 and 4-3 they acknowledge that alternate sources of water would be available during such an emergency although it would be of lower quality than Mokelumne. The enormous cost of ensuring this high quality of water even during an emergency does not equate with responsible fiscal management on a year round, long term basis.

In conclusion, we feel that the EIR does in fact demonstrate that a reservoir at the Buckhorn site would have a detrimental impact on the Moraga area as a whole, and that before such a monumental capital project is undertaken, the authorities should give

- Page Three -

further consideration to the use and treatment of available lesser quality water during any future emergency.

Yours sincerely,

A handwritten signature in cursive script, appearing to read "Hazel McClearnen/Shewell".

Hazel McClearnen/Shewell

A handwritten signature in cursive script, appearing to read "Paul Shewell".

Paul F. M. Shewell

copy to Board of Directors.
E.B.M.U.D.

RECEIVED

JUN 9 1988

SECRETARY'S OFFICE

1119 Holl Street
Alameda, California 94501
415/521-1500

June 7, 1988

Board of Directors
East Bay Municipal Utility District
2126 Adeline Street
Oakland, California 94607

Gentlemen:

I have been a resident of the East Bay area all my life and almost remember when the first drop of Mokelumne River water came out of our faucet. The great advantage of living here is to have a governmental corporation like EBMUD. I consider it efficiently operated, pro-active, and free bias or scandal.

You are again at an important decision making time. Because of the continuing growth of Alameda and Contra Costa Counties, another cycle of drought, and the possibility of a natural or man-made disaster damaging the aqueduct, it is obvious that at least one additional terminal storage reservoir is needed. I know you are considering two or three sites and would not presume to suggest which is best. This is obviously a recommendation to be made by your professional staff after investigating all alternatives. However, the logical course you should follow is to heed your staff and not succumb to the pressures of vocal groups who are concerned only with their personal interests.

No matter where the reservoir is placed there will be disruption and environmental change. This is not to say the change is wrong or bad. What adversely concerns some may be of benefit to others. Look at the history of EBMUD and you will agree that over the years your predecessors' decisions have brought the greatest good to the greatest number, environmentally, to our sportsmen as well as consumers.

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JUN 10 1988

OFFICE OF PLANNING

if you would like me to present
oral comments at some future meeting, please communicate
with me.

Very sincerely yours,

Richard Young
RICHARD YOUNG

(EBMDD)

H. S. PETE FOWLER, PE.
6633 COLTON BLVD.
OAKLAND, CALIFORNIA 94611
PHONE: (415) 339-1712

June 3, 1988

Richard L. Kolm
Assistant Chief Engineer - Planning
EBMUD
P.O. Box 24055
Oakland, CA 94623

Dear Sir:

Re Security of Mokelumne Aqueduct

I suggest evaluation of the following measures:

1. To stabilize one or more of the present elevated aqueducts. Inject umbrella type anchors into the firm sand and stay the structures with post tensioned cables or rods. (13)
2. Consider a spare aqueduct carried in an anchored, simple, roofed, trough the length of the pipe. In event of flooding, the trough would float. With adequate freeboard and a barrier and a pump - say every two miles - this might operate as a flume with no pipe at all. (13)

Sincerely,



c. Walter R. McLean
Raymond B. Seed

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JUN 09 1988
OFFICE OF PLANNING



The Mulberry Tree Preschool
1455 Saint Mary's Road
Moraga, CA 94556
(415) 376-1751

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JUN 09 1988
OFFICE OF PLANNING

June 6, 1988

Mr. Richard L. Kolm
Asst. Chief Engineer for Planning
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

Dear Mr. Kolm:

I am the owner of a business that will be affected by your digging of a pipeline along St. Mary's Rd. for the Buckhorn Project. Your environmental impact report states that the effect to business along the route "would create undesirable but short term environmental impacts" The idea of noise and dust in our school is intolerable, even for a short time. I am concerned about health problems, such as allergies, that would emerge because of dust in the air. In addition, to children affected by the situation it is not short term, but a permanent part of their early childhood education experience. (16)

The traffic problems outlined would be very difficult and would affect one hundred families, not fifty as noted in your report. The school is licensed at a capacity of fifty children at one time but one hundred families are served by our program. The school would be affected by more than the actual digging in its immediate area. Traffic diversion along all of St. Mary's Rd. would affect traffic flow to our school. This is a long term inconvenience lasting several months.

I am also concerned about a safety issue. In addition to the equipment and traffic congestion an open ditch will run along side of my school, the park and jogging trail used by children of all ages. What will be done to protect children as they explore the ditch and unattended construction equipment? (16)

Another more subtle but significant result of the mere discussion of the Buckhorn Project has been a loss of business on my part. The only source of income for my business is tuition from parents. I currently employ fourteen local men and women, some of whom are college and high school students. If I do not have sufficient enrollment these people could lose their positions.

I depend on my hard earned reputation as an outstanding school to attract families and keep my business stable. What I am finding as prepare to enroll students for the future is that parents are asking me questions about the Buckhorn Project. Some of these are: "What



The Mulberry Tree Preschool
1455 Saint Mary's Road
Moraga, CA 94556
(415) 376-1751

kind of assurances can I give them about the quality of education during the time of construction?", "Do I realize that an open ditch will be near the school where the children play and walk?" and "Am I aware of the inconvenience the proposed digging will be to their family?". Parents have the right to be concerned about their child's education and safety. In fact no matter how good the reputation of the school, they will not put up with the inconvenience they invasion with St. Mary's Rd. torn up.

I have taken a recent telephone survey and have found all current early childhood programs in our area are full and the need for the facility does exist. Your proposed plan is putting my business in jepardy. This program serves a real need to the local community.

Your ideas of the "short term effect" the Buckhorn Project has on my business are greatly underated. I am, as a matter of fact, facing them now in a financial way as I talk with parents who have concerns about the future quality of my program.

I believe you have greatly underestimated the problems this one small buiness is facing because of the Buckhorn Project. Because you minimize the problems facing my business you have led me to seriously doubt the other inferences you have made regarding the E.I.R to the local community.

Sincerely,

Mary Ann McLeod

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JUN 10 1993

OFFICE OF PLANNING

166 Cañon Dr.
Orinda, CA 94563
June 6, 1993

23

Dear Sir,

You asked if I would look over your

Environmental Impact Report and give you
my thoughts. I would say not enough time was
spent to observe and only in a random manner.
Of Buckhorn should be studied more. Riparian
habitats are becoming very rare, Mature *Coussonea*
is a quivering threat area to try to save some creek
Juglans hindsii should be looked for. Oak
scrub to mixed woodland is habitat for

23

Quercus. *Quercus* is very common found in large
patches of Poison Oak as in Orinda. *Fraxinus* is
where one finds *Fraxinus* *agrestis* & *Fraxinus*. The
first is found in the Livermore area and the last in Alameda
Creek area. Briones Reg. Park has *Calochortus pulchellus*
so it could also be found in Buckhorn.

As for Los Vaqueros it is the most damaging of
all sites I have heard of in a long time. Of the seven
rare plant communities found there four are
extremely rare and should be protected at all costs.
There could be rights for new species and/or rare
plants (endemic plants). This area should be under
complete protection.

32

Yours truly,
Wayne Roderick

Wayne Roderick
166 Cañon Dr.
Orinda, California 94563

5146 Hilltop Drive
El Sobrante, CA. 94803
8 June 1988

East Bay Municipal Utility District (EBMUD)
Mr. Richard L. Kolm, Assistant Chief Engineer for Planning
P. O. Box 24055
Oakland, CA. 94623

Dear Mr. Kolm:

The following are my comments on the Water Supply Management Program:

If the potential earthquake damage and levee failure as so severe, as you state in the WSMP Draft Environmental Impact Report, Technical Report, and Summary, why is EBMUD not getting onto that problem immediately? Why are you not allocating money to the safety aspects (strengthening present aqueducts, burying aqueducts, building additional aqueducts around the Delta, and further repairing the levees) as your prime consideration instead of coupling those with building a new reservoir?

These two aspects of the Water Supply Management Program should be kept separate. Safety measures would not be growth inducing, whereas a new reservoir would be.

Granted it would be costly to build new aqueducts around the Delta, but this expense seems justified if one faces the safety problem head on. Acquiring new land contiguous to watersheds, in conjunction with the East Bay Regional Park District, would help stave off housing and business development which is basically the main problem. Just providing new reservoirs would only be an inducement to business and housing development which is exactly what this area does not need. It would only be a temporary solution anyway.

Cannot EBMUD use its prestigious history of service to the community to influence the city governments to use restraint in their growth?

Very truly yours,

Audrey B. Sayre

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OFFICE OF PLANNING

June 8, 1988
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Board of Directors: JUN 10 1988
 SECRETARY'S OFFICE

I moved to Moraga

last year because I wanted
 to enjoy the empty & lonely
 open space. The Buckhorn
 Reservoir will take all
 of this away. I'm concerned
 about potential earthquake
 hazard area as a senior
 citizen I do not want your
 paradise and disruption.

Please do not destroy
 Moraga I love it just
 as it is

Concerned,

Wynne Jones
 601 Elder Road Rd.
 Moraga, Calif

(21)

(16)

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OFFICE OF PLANNING

Clark D. Frentzen, P.E.
1381 Dewing Lane
Walnut Creek, CA 94595

June 10, 1988

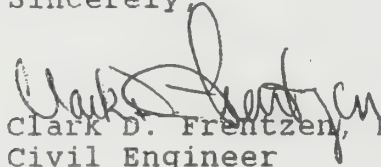
Richard L. Kolm
Asst. Chief Engineer for Planning
EBMUD, P.O. Box 24055
Oakland, CA 94623

Dear Mr. Kolm:

This is concerning the technical report and Draft EIR for the proposed Water Supply Management Program by EBMUD.

I have reviewed these reports and have some difficulty with the conclusions and recommendations by the EBMUD staff to the EBMUD Board for further actions. My views on the various issues are summarized in the enclosure for your information and incorporation into the Public Meeting record and Final EIR.

Sincerely,



Clark D. Frentzen, P.E.
Civil Engineer

VIEW COMMENTS ON EBMUD WATER SUPPLY MANAGEMENT PROGRAM

EIR SECTION 2.2: POTENTIAL EFFECTS OF WATER CONSERVATION ARE HIGHLY UNDERSTATED WITHIN THE EIR. CONSERVATION AND RATIONING WILL HAVE IMPACTS ON LAND USAGE, HYDROLOGY(GROUND WATER RECHARGE), BIOLOGICAL RESOURCES(HABITAT REDUCTIONS), AIR QUALITY(REDUCTIONS AS RESULT OF IMPACTS ON VEGETATION) AND VISUAL QUALITY(BROWN VEGETATION). THESE IMPACTS MUST BE FURTHER DISCUSSED WITHIN THE EIR.

10

EIR SECTION 2.4: GROWTH INDUCEMENT IN THE SERVICE AREA IS DISCUSSED, HOWEVER, HOW DOES EBMUD'S HISTORY OF ANNEXING NEW AREAS INTO THE SERVICE AREA FIGURE INTO THE ANALYSIS? THIS HAS CURRENTLY CREATED A PROBLEM FOR THE HISTORIC SERVICE AREA USERS THIS YEAR, AND MOST LIKELY WILL BE A PROBLEM IN THE FUTURE IF EBMUD DOES NOT TAKE ACTION TO PLAN FOR THE INEVITABLE. EBMUD HAS A DUTY TO RESPOND TO PLANNING COMMISSIONS AND CITY COUNCILS TO ADVISE THEM OF A PROBLEM IN SERVING THE NEEDS FOR NEW DEVELOPMENTS WHEN THIS WOULD SIGNIFICANTLY IMPACT ON THE CURRENT CUSTOMERS SERVED BY THE EBMUD SERVICE AREA. THIS IS THE VERY REASON THAT WE NOW MUST RATION WATER TO ACCOMMODATE THE LACK OF PLANNING ON EBMUD'S PART OVER THE PAST YEARS.

4

2

EIR SECTION 4.3: WHY HASN'T THE PURCHASE OF ADDITIONAL WATER RIGHTS BEEN DISCUSSED AS AN ALTERNATIVE FOR INCREASING THE SECURITY OF SUPPLY? CERTAINLY THE COSTS OF THIS ALTERNATIVE MAY BE FAR LESS THAN BUILDING A RESERVOIR THAT MAY NEVER BE FILLED OR EVEN REQUIRED TO MEET SERVICE AREA NEEDS.

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EIR SECTION 4.4.1: PERHAPS EBMUD NEEDS TO REVISE ITS GOALS SOMEWHAT AND EITHER PURCHASE ADDITIONAL OR EXCHANGE WATER RIGHTS TO A LOCATION THAT WILL PROVIDE USABLE WATER TO THE SERVICE AREA. CUSTOMERS PREFER TO HAVE A RELIABLE PLENTIFUL SOURCE OF WATER RATHER THAN A SLIGHTLY HIGHER QUALITY SOURCE OF WATER THAT CANNOT BE MAINTAINED FOR USE BY EBMUD. TO SUMMARIZE, I WOULD RATHER DRINK DELTA WATER THAN HAVE ALL OF THE LANDSCAPING AND WILDLIFE IN MY NEIGHBORHOOD DIE AS A RESULT OF MISMANAGEMENT BY EBMUD.

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SUMMARY DOCUMENT; BACK PAGE, EBMUD BOARD DECISIONS NUMBERS 1 AND 2: 39% RATIONING ABOVE AND BEYOND THE NORMAL SAVINGS IN WATER USE ALREADY BEING ENJOYED BY EBMUD IS UNREASONABLE. THIS WILL PENALIZE THOSE USERS WHO DO NOT WASTE WATER DURING ABUNDANT WATER YEARS. EBMUD MUST COME UP WITH AN EQUITABLE SYSTEM BASED UPON LOCATION, CLIMATE, LAND USE AND SIZE, NUMBER OF RESIDENTS, SOIL TYPES AND PLANTING REQUIREMENTS IN ORDER TO EXPECT TO HAVE AN

3

EQUITABLE AND REALISTIC POLICY FOR USE DURING DROUGHT OCCURRENCES. TO DATE, LACK OF PLANNING ON EBMUD'S PART IS NOW CONSTRUED AS AN EMERGENCY FOR ALL OF THE CUSTOMERS WITHIN THE SERVICE AREA.

6. SUMMARY DOCUMENT; BACK PAGE, EBMUD BOARD DECISIONS NUMBERS 3 AND 4 : ADDITIONAL ALTERNATIVES TO WATER BANKING NEED TO BE EXPLORED BEFORE THE BOARD CAN EFFECTIVELY MAKE A DECISION AS TO WHETHER A RESERVOIR IS THE PREFERRED COURSE OF ACTION FOR SAFEGUARDING AGAINST WATER SUPPLY SHORTAGES. THE BEST METHOD OF MEETING A LOCAL SHORTAGE IS TO SHARE RESOURCES WITH OTHER REGIONAL WATER SUPPLY AGENCIES WHO HAVE ADDITIONAL CAPABILITY FOR WATER SUPPLY. THIS WOULD REQUIRE EBMUD TO INTERTIE WITH OTHER WATER DISTRICTS AND SHARE IN THE BENEFITS AND COSTS OF DROUGHTS AND SHORTAGES AS THEY MAY OCCUR FROM AREA TO AREA WITHIN THE REGION. THE AMOUNT OF SUPPLY/STORAGE REQUIRED FOR THE CURRENT EBMUD SERVICE AREA IS NOT REALLY AN ISSUE FOR THE EBMUD BOARD TO DECIDE UPON. GOOD SOLID ENGINEERING DATA, COST ESTIMATES, AND EXPECTED BENEFITS TO BE OBTAINED ARE THE CRITERIA USED IN SIZING STORAGE REQUIREMENTS FOR A PROPOSED RESERVOIR.

JUN 13 1988

OFFICE OF PLANNING

June 9, 1988

Christine Cremer
432 Tharp Drive
Moraga, CA 94556Sanford Skaggs
EBMUD Board President
2130 Adeline St.
Oakland, CA 94623

Dear Mr. Skaggs:

I am writing to protest certain aspects of your planned Buckhorn Reservoir Site Plan. I can understand the need for additional water storage capacity, but it is grossly unfair that you are considering using Moraga roads as access for this project. Surely it would be more appropriate to approach the site from San Ramon or areas of Alameda. I suggest this for two reasons.

Firstly, San Ramon is the area that is going to benefit from this new reservoir so it is, therefore, appropriate that the residents of that community be the ones who suffer the inconveniences entailed in building the reservoir. Secondly, Moraga roads are simply not capable of handling any more traffic. As you must surely know, Moraga Way is already jammed with traffic, especially at rush hour. Moraga is a strictly residential community with children riding their bikes all over the place and walking to school along the very routes you are planning to use. EBMUD would really be endangering their lives with their trucks and equipment.

I hope you will consider these points carefully before proceeding with your Buckhorn Reservoir plans.

Sincerely,



Christine J. Cremer

cc: Richard Kolm
Assistant Chief Engineer for Planning

JUN 13 1988

OFFICE OF PLANNING

June 10, 1988

Board of Directors
East Bay Municipal Utility District
2130 Adeline Street
Oakland, CA 94623

Dear Board Member,

After careful examination of the procedures used by East Bay M.U.D., to arrive at Buckhorn Reservoir as a 'necessary' part of a new Water Systems Managemnet Policy; one is left with the unavoidable conclusion that your agency has unashameably engaged a process often referred to as "Reverse Logic."

Quite simply, the convoluted path of reasoning [or more accurately; rationalizing] taken to date is replete with examples of this. Where E.B.M.U.D. starts with a conclusion — Buckhorn Reservoir — and then looks backward from that conclusion for a path of reasoning from the initial policy formulation stages, that will lead back to, or otherwise justify, the pre-conceived proposal. (6)

Its unfortunate that some at East Bay MUD, such as, J. Gilbert, S.Skaggs, or W. McLean, are already — for all intents and purposes — locked into a pro-growth, pro-dam posture regardless of what I or anyone else may have to present on the subject. I really believe, however, that if the remainder of you on the Board view the evidence objectively and honestly, you will have to acknowledge such a flawed and illogical approach. In fact, it is difficult not to see all the indications of such a fundemental breakdown in reasoning. Esamples abound.

One of the more flagrant, is the earthquake justification.

Point: There has never been an earthquake caused interuption of water (7)

service for East Bay MUD - ever.

Point: If a major earthquake were to occur, logic demands that all ramifications be examined. Not just those exclusive to enhancing a particular point of view. As was done when your staff "worried" over protracted pipeline/aguaduct interruption, but didn't acknowledge any serious concern over the potentially devastating consequences to the residents below Lower San Leandro Reservoir were that same earthquake to compromise Buckhorn Dam.

21

Point: The current E.I.R. states a probable 13 month delay in aguaduct/canal/pipeline repair, and subsequent restoration of complete water service. This estimate is so overtly dishonest as to be an embarrassment to E.B.M.U.D.. 5 to 6 months before any work starts (?) -now really. Double shifts instead of triple shifts. No statement of time savings of construction of a temporary bypass. 5 day workweek -not 7. Well, you get the idea.

7

Another area of concern that exemplifies a consistent bias, is the almost cursory dismissal of the Los Vaqueros alternative.

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Point: One reason given is that this reservoir would not contain pure Sierra water. But, of course, say no more. If this is not compelling reason to spent \$170,000,000 to inundate one of the very last large, beautiful, and pristine valleys of the East Bay (in an era when Open Space is rapidly becoming a rare and precious commodity), then, what is?

22

Examples go on and on. From failure to address growth inducing impacts. A problem, in fact, among several that are similar to those in the TriValley Waste-water Authority's F.E.I.R.-- which have lead to several lawsuits. To failure to fully represent viable and less environmentally destructive alternatives.

24

There is growing suspicion that EBMUD may be moving in directions not in the best interest of their customers. General Manager J. Gilbert was quoted at a meeting late last year as saying; "In case of a shortage, the

district would sooner ration water to existing customers than refuse water to new developments." * Which appears indicative of a fundamental policy problem: Growth before current customers. (2)

Before East Bay MUD extends itself into projects that may be far removed from either the needs or wishes of it's customer base — and begins imposing the resulting large financial burden upon those same customers —there should be an objective examination of exactly what those needs and wishes are.

East Bay Regional Parks District recently conducted a polling of 1,500 east bay residents, to get a more accurate idea of what the people they're serving really want. It was enlightening. A 2 to 1 preference for spending limited funds on land acquisition rather than park improvements and development. The District then re-orientated their policies toward this objective.

In the same manner, it might be wise for EBMUD to first find out what it's customers think. A policy consistent with customer preferences would save a considerable amount of trouble and expense down the road. But, of course, care would need be taken to avoid any built-in bias in the questionnaire language [such as; 'Would you accept rationing every year to avoid constructing Buckhorn Reservoir?']. Even so, it could be done. (1)

In summary, I would hope that a majority of the Board recognize that the approach, to date, in trying to justify the damming of Buckhorn Canyon has, at the very least, been intellectually dishonest. East Bay M.U.D. can do better. Certainly your customers deserve better.

Respectfully Yours,



James P. Blickenstaff

Tassajara Now and Tomorrow/aua
P.O. Box 8500-115
Danville, Ca 94526

* Sierra Club YODELER, Environmental
News, San Francisco Bay Chapter, Oct 87.
cc., East Bay M.U.D. Board, others.

Sierra Club Reg. Cons. Group
6014 College Ave.
Oakland, CA 94618

in Blickeustaff
110 Talavera Lr.
n Ramon, CA 94583

NT/aua
P. Box 8500-115
nnville, CA 94520

Richard Kolm, Chief Engineer
E. B. M. U. D.
P. O. Box 24055
Oakland, CA 94623



SAIM MCKIRGAN

ARTIST-ART CONSULTANT

181 Shuey Drive
Moraga, California 94556
415/376-2917

June 9, 1988

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JUN 13 1988

SECRETARY'S OFFICE
RECEIVED

JUN 13 1988

OFFICE OF PLANNING

Mr. Sanford Skaggs
EBMUD Board President
2130 Adeline Street,
Oakland, Ca 94623

Re: Buckhorn Reservoir Affects All Bay Area Life

Dear Mr. Skaggs,

Together, the Directors, the employees of EBMUD and the citizens of Moraga are the caretakers of the Planet. This is the bottom line. Together we all are responsible for the care of the environment and what we do or do not do affects our futures. We can affect the ecosystems in which we live and in turn the ecosystem affects our spirits and our connection to the land.

We, the people of Moraga and I imagine most of EBMUD's Directors and employees live in the congested East Bay. Consequently we all have very little "land" to enjoy! I mean wild land close to cities and homes so that people do not have to drive to the Sierra's. Close so that city children and adults can take day trips to connect with the land that gives them life. Close wild land is important so that it can be visited. People need to see the falcons, buzzards float and wild trout jump and experience the freshness and the simplicity that city lives lack. The most important factor you must weigh when EBMUD's Directors make their decision between the three sites is that Buckhorn is closest to the city population that needs the wild space the most!

My other concerns are as follows:

1. Blasting and Dynamite noise affects people and wild life. We can hear the Chabot Gun Club "popping" in the distance. Dynamite blasting would be like living in a war zone. (19)
2. Digging of the trench at night would be extremely disturbing to sleeping children and adults who need to work and go to school. It would cause an irritable and stressful population. (16)
3. The people of Moraga have only two pieces of public land! The Moraga Commons park and the Camino Pablo park. The Camino Pablo park would most likely be useless during the seven years of Buckhorn construction due to noise and dust. The Moraga Commons would be useless during the digging of the pipeline due to dust and noise. Where are the children to play? (16)
4. Schools, a nursery school, a grammar school an intermediate school and a college ALL adversely affected with confusion, dirt, air pollution and noise. All of the children of Moraga will suffer no matter where they live in town, no matter what their age. (16)

5. A Senior Citizens Retirement Home where frail and ill people live would be adversely affected with truck traffic, noise and dust. (16)
6. Climate Change. The south end of Moraga is now the coolest part of town because it is close to the San Leandro Reservoir. It is foggy in the morning and evenings when the North end of Moraga is balmy. With Buckhorn most probably all of Moraga would be cool and the south end even cooler, and foggier. (19)
7. East Bay Air Quality. With the digging the dynamiting of the hole and the pipeline trench the air in Moraga will be adversely affected. This bad air will be bad for everyone because air drifts, winds blow predominately from west to east or north to south. This means that the air quality can be affected in Alamo, Danville, San Ramon, Livermore and Pleasanton. What dust and dirt does not settle on and in the lungs of Moraga will drift and blow to the rest of the East Bay. (19)
8. It seems ironic that the people of Moraga pay EXTRA to have water pumped up to our homes and now EBMUD wants to disturb the lives and environment mainly of Moraga for 7 to 8 years so water can flow DOWN. (19)

The creation of the Buckhorn Reservoir will be a extreme sacrifice for the town of Moraga. I do not think any community should be asked to make such a sacrifice, not Pinole either. It seems that the Los Vaqueros would cause the least disturbance to the fewest lives. (29)

In closing I would like to remind the Director's of EBMUD to look at the entire Bay Area for a moment, the population density, the congestion and the problems with violence and drugs and ask yourselves: Do we really need to destroy one more blade of grass, one more scenic wild area?? We have destroyed enough of our connection to the land, our source of peace and California wild life! EBMUD can create a hole and water to flow to our homes; EBMUD cannot create wild trout, a falcon or a lowly ant. But EBMUD can do great things and the greatest of all would be to leave the Buckhorn Valley alone.

Sincerely,

Sally McKirgan

cc/Belinda Kendall Mayor Moraga
Moraga Town Offices
350 Rheem Blvd.,
Moraga, Ca 94556

cc/ Editor Contra Costa Times
2640 Shadelands Drive,
Walnut Creek, Ca 94598

June 13, 1988

As twenty seven year
residents of Moraga, we
are vehemently against
Buckhorn Reservoir!

Kay and Vi Boddy

VI BOODY
1295 LARCH AVE.
MORAGA, CA 94556



Richard Kolm
2127 Adeline
Oakland, Ca. 94623

Candace Kowes Berthrong
 93 Warfield Drive
 Moraga, California 94556

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 JUN 13 1988
 SECRETARY'S OFFICE

Thursday
 June 9, 1988

Board of Directors
 East Bay Municipal District

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 OFFICE OF PLANNING

Dear Board members,

As a member of the Parents Club Board at Joaquin Moraga Jr. High and a parent of three children who will be attending J.M. next year (88-89), I began to feel a great deal of concern regarding the Buckhorn Reservoir Project during our regular meeting today. Quite an extensive and informative report was given today by a very astute member of the school board who has attended many meetings concerning this project, the most recent, I understand, of your Board in Oakland. Not much detailed information is filtering through fast enough to make it possible for the public to be as well ~~as~~ informed as ^{they could be} ~~possible~~ on the effect of this project to their community as well as the general area at large; but it has been my immediate impression that this is a giant project which could have quite a few really serious negative effects on our town of Moraga.

First of all, according to the information available to me today, there appears to be many questions ~~to~~ still (over please)

unanswered regarding the Environmental impact ^{of} to our area. Specifically speaking, the disruption of Camino Pablo, the main access to two of our schools and the hazards of trencher and trucks and noise and pollution to several hundred of our elementary and Junior High students. This really concerns me especially when we're dealing with bus transportation problems also. There is an unknown effect on the impact of the weight of that amount of water in relationship to seismic activity. Also, there is an unknown effect of the impact such a large body of water would have on our valley's climate. Also, if their project is being pursued to ~~encourage~~ encourage more growth in our area, I'm against it. Moraga Valley has limited access, ^{and} is working hard to preserve its "rural" atmosphere in balance with limited growth. This great body of water is too close to homes and community. I would be more in favor of a location more remote and even question its need altogether.

There are so few small communities such as ours. Moraga is unique. It's not that we are not open to change but that we are working hard to preserve a safe, community minded, quite quiet haven, close to a large metropolitan area where the quality of life is intact. It's a family town where schools, church and community commitments are top priorities.

I really feel it would be a ~~dis~~ disservice to override community sentiment if viable alternatives exist. It's not only an economic issue, real people and the effect on their lives ~~are~~ is at hand.

Thanking you, in advance, for your thoughtful consideration of these points, Sincerely, Randy Burthron

Mrs. Adel Hogan
759 Crossbrook Drive
Moraga, Ca 94556

June 9, 1988

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OFFICE OF PLANNING

EBMUD Board of Directors
P. O. Box 24055
Oakland, Ca 94623

Dear Board of Directors:

I urge you to preserve Buckhorn Canyon and work towards viable water mangement alternatives instead of such destructive water development projects.

As a resident of Moraga, I find your EIR did not address the stress, quality of life nor the safety of the residents during and after the construction of the proposed Buckhorn dam. I am concerned about emergency vehicles being able to reach those in need during the construction of the proposed dam.

Sincerely,

Adel Hogan
Mrs. Adel Hogan

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WILLIAM L. KNECHT

Attorney at Law

303 DEERFIELD DRIVE

MORAGA, CA 94556-2504

415 376-9429

8 June 1988

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OFFICE OF PLANNING

Mr. Sanford Skaggs, President,
EBMUD Board of Directors
2130 Adeline Street
Oakland, CA 94612

re Buckhorn Reservoir

Dear Sir:

Some of my neighbors are getting involved in opposing Buckhorn Reservoir and I can't tell whether they are using it as excuse to vent their no-growth views (if indeed they have such) or if Buckhorn really is a badly conceived project.

The flyer they sent and also hand delivered to me claims the following defects:

- a) Excavation of major roads
- b) Traffic Congestion
- c) Noise, dirt and disruption
- d) Threats to safety of school children
- e) Potential earthquake hazards
- f) Permanent loss of over 1,100 acres of open space

As to the alleged "loss of open space" it seems to me that a large lake or reservoir is a very attractive addition to the immense amount of open space we've got preserved and seldom use. If multiple use could be offered (and I believe it is available on some of your reservoirs) would not that be a positive element in the plan?

As to the "potential earthquake hazard" I confess I don't know what they fear. I have understood that there are allegations that man-made reservoirs increase earthquake hazards but I have understood we live on a fault line already. What are the facts?

No one would enjoy reports that any school children are endangered, much less reports that a child was hurt. Less than I. If there is construction traffic along school routes, can not the contract require the contractors to provide paid school crossing guards?

As to the "noise, dirt and disruption", I take it that is another way of spelling "traffic congestion" and thus I assure these are merely variations on a common theme. In fact, the excavation of roads is the principal cause of both of the other elements. Is it not?

Mr. Sanford Skaggs
3 June 1973
Page Two

As to that issue, may I make a suggestion? I speak only for myself as far as I know, but I live on Sanders Creek and have been to meetings with others similarly situated and listened to complaints about the additional runoff and attendant risk to our property from the development at the Ranch. When I first moved here in 1960, I had a severe erosion problem and tried to get the county to line the creek as has been done with some others in the county. I was told by the Flood Control District that while they would like to do that, there was not sufficient money to pay for it.

Could not the right of way of the Flood Control District be used by EBMUD to route it's lines until they reached the existing aqueduct? I for one would love to see the creek contained permanently and to have the opportunity to level out my lot. Now it would not be an unearned blessing but I could put up with it. The project as I view it would consist of a concrete ditch to carry the existing creek and any additional run off, plus an aqueduct for the District.

I would expect the following inducements might attract other protesting landowners to endorse such a proposal: First, no increase in property taxes based on any alleged increase in value of the property; and Second, the opportunity for each landowner to pump water from the contained creek for use in the yard of the landowner.

I would like the assurance that Buckhorn is the most cost effective way to improve water supplies. I don't like these water curtailments and would hope that this or some other addition might carry the promise that reserves would be improved on a per customer basis, rather than simply making possible more development. And I would like the response to your engineers to my suggestion to get the construction off of the streets and into the Flood Control District's Right of Way.

Respectfully yours,

William L. Encher

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JUN 10 1983

SECRETARY'S OFFICE

June 7, 1983

East Bay Municipal Utility District
2150 Adeline Street
Oakland, CA 94607

Dear Board of Directors:

I read with great alarm that 90% of those attending a recent hearing on Buckhorn Canyon Reservoir showed their hands in opposition to the project. I am writing this to cast my vote in FAVOR of the proposal.

It makes good sense to me to provide a cushion of water should we be in a drought cycle in which our supply runs out every few years. Goodness, I think it would be most prudent to go ahead with your plans for a large new reservoir. I favor the Buckhorn Canyon site. Go for it.

Very truly yours,



Forrest M. Smith
Orinda

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2. B. MUD
P.O. Box 24055
Oakland 94623

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JUN 13 1983
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Sirs:

Permit ^{me} to express some opinions and at the same time avail myself of the opportunity to comment on your Water Supply Management Program.

It's obvious that as A.C. transit, E.B.'s name is mud; but whereas the woes of the former have been publicized, those of the latter have not.

EB/mud was approved by the voters in November of 1931 following the September fire that year in Berkeley as there was no water available with which to fight the fire.

Built to alleviate one water shortage, for 50 years there was no problem with the water supply and the agency was able to annex freely.

In 1976/77 EB/mud experienced its first water crisis and now scarcely 10 years later the East Bay has another. At times one wonders at what has been built here and if perhaps EB/mud wasn't an error.

EB/mud has made possible a vast metropolitan area which resembles more a cancerous growth than it does any kind of a community.

Moreover, in an area prone to earthquakes and fires, urbanization of Alameda and Contra Costa Counties has created the potential for a disaster which surpasses

in magnitude what occurred in San Francisco in 1906.

How soon everyone has forgotten and everybody has ignored the earthquakes of 1955 in Walnut Creek and those of 1980 at Livermore as well as the 1923 Bern Hills five.

How long must it be before EB/mud and the State learn that California has simply run out of water and that further urbanization under present conditions is impossible.

To save scarce drinking water, EB/mud engineers now propose to pump excess water from the Delta to Central Reservoir for irrigation purposes.

What excess water!!

Perhaps the staff of EB/mud was not aware that the snow pack is light thruout the Sierra Nevada mountains with little run-off anticipated anywhere except in the far north.

More pumping will simply aggravate salt water intrusion in the Delta, which is the heart of the California Water System, and that heart has been over-taxed. (10) (14)

For these reasons, I personally believe that imports of American River water to supply EB/mud is a stupid idea as is the idea of constructing the Buckhorn, Vague and Pinole Reservoirs.

Oh, they'll solve the problem for a few years, as did Cachuma Reservoir at Santa Barbara, but then we'll be back to where we started with no solutions in sight.

ther than those of importing Colorado River water 35
r some such nonsense.

the Bureau of Reclamation has finally realized that
here are no more "reclamation" projects and its role
now that of a caretaker for what has been built.
Perhaps EB/mud should do the same.

Yours truly
Charles S. Marvinovich
2108 Shattuck Ave. #127
Berkeley, California 94704
June 7, 1988

ivs:

On May 28 a group of 46 led by Joe Goldstein of Walnut Creek toured
Buckhorn Canyon along Rocky Ridge trail.

I went along as this was an opportunity to see first hand what the
issue was all about.

The Buckhorn and Kaiser Creek Canyons appear to be excellent sites for a
reservoir as they are long, deep, and narrow minimizing evaporation.

So favorable do they appear to be that one wonders why they weren't
utilized years ago.

But on second glance there seems to be 2 major disadvantages with the
canyons which must be taken into account in my opinion.

The hillsides are marked with numerous small landslides which make one
wonder about their safety in the event of a large slide.

Such a huge landslide did occur December 9, 1950 near the Orinda mouth of
Caldecott tunnel which took months to clear.

The elevation of Pardee Dam is 568' and that of Buckhorn 745' both probably
the spillway.

The Buckhorn Reservoir doesn't appear to be very cost efficient in it being
filled by gravity flow as the other EB/mud reservoir.

Pardee comment. Charles S. Marvinovich

P.S.

Please send me copies of any maps which show the trails
on EB/mud lands, especially of Buckhorn Canyon.



BOARD OF SUPERVISORS

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MAY 14 1988

OFFICE OF PLANNING

DON PERATA

SUPERVISOR, THIRD DISTRICT

May 24, 1988

EBMUD Board of Directors
2130 Adeline Street
Oakland CA 94607

Dear Board Members:

This letter is to express my strong support for a water supply management program that emphasizes water conservation, water reclamation and water marketing.

I believe that before serious consideration is given to such expensive and environmentally damaging projects such as Buckhorn Reservoir, every reasonable alternative must be addressed and exhausted. I do not believe this has been done to date.

The issue of water supply management is a difficult one--made ever more imperative by the present water shortage. Because the decisions made on this issue will affect us all far into the future, my hope is that concerned individuals, groups and elected officials can discuss it in an open and constructive manner. This discussion must particularly include future population growth in the East Bay and the financial impact of water projects on the public.

Thank you.

Sincerely,

DON PERATA

DP.g

cc: S.F. Bay Chapter,
Sierra Club

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FRESH WATER FROM THE OCEAN, AN UNLIMITED
WATER RESOURCE TO CIRCUMVENT DROUGHTS

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Desalination of seawater is a highly developed technology to resolve any potential of a water shortage which might occur as a result of a 20 year drought cycle extending to the year 2000.

The utilization of distillation to desalinate seawater has been around for many years, but this technology has been considered too energy intensive to compete with the cost of collecting rain water, i.e. if it rains. In the early 1950's, the United States government assisted in the development of membrane technology for reverse osmosis applications to desalinate brackish and seawater for drinking water purposes. The concept was to produce a balanced quality water which would meet Environmental Protection Agency water quality standards for potable (drinking water) use at more economic levels.

To begin with, the applications were confined to water pretreatment needs in electronic manufacturing and other industries requiring inexpensive high quality water. In 1976, the first large (1 MGD) municipal reverse osmosis (RO) desalination (brackish) plant in the USA was commissioned at Venice, Florida to become a demonstration showplace for this technology and the inexpensive water produced to supply the community. The actual cost of this water after a ten year operational period (including amortization of plant and equipment and operational maintenance) was: \$0.40 per 1000 gallons. Most water districts in California are supplying water to home users at an average cost of \$2.00 per 1000 gallons which takes into account the operational cost and maintenance of a water distribution system. Since 1976, the state-of-the-art in desalination has advanced considerably in RO to produce a balanced and high quality water from seawater at a cost of \$3.50 per 1000 gallons where distillation technology was more than twice as expensive as the aforementioned RO. However, the largest seawater desalination system in the world utilizes distillation technology and is located in Saudi Arabia where 200 MGD of potable water is produced and pumped 500 miles inland to Riyadh so as to preserve ground water for future generations.

More importantly, many water districts in California have employed little planning to avoid potential water shortages until it was too late for any immediate resolution short of a mandatory policy to conserve water until the water shortage problem passes. This policy is like waiting with a bucket for it to rain inexpensive water when it may not rain

or rain enough water. In the 1976-77 drought in California, a few residents were denied sufficient water to maintain the appearance of their property, i.e. watering lawns and shrubs, and those property owners faced a devaluation of their property. In some forced sale situations, the owners had to take an unnecessary loss on the sale of the property for lack of water and the policies of the water district.

Today, the situation is different in that alternatives exist for water districts to provide water from other resources which are not affected by a drought circumstance; therefore, the district can be held liable for not providing adequate water supplies. The alternative best suited to accomodate poor water resource planning situations is the desalination of seawater by reverse osmosis(RO). Such plants can be ordered and brought on stream in six months to meet shortfall requirements of ten percent or more at a water cost impact to the user of \$0.25 to \$0.55 per 1000 gallons. Considering the cost of water acquired from a vending machine at your local grocery store at \$0.35 per gallon which translates to \$350 per 1000 gallon, it appears that serious consideration should be made by water districts to take appropriate steps to avoid water shortages which can cause properties to devalue and may create legal damage suits against the water district and its management.

The response time for the construction of a reservoir/dam is 5-10 years and such projects are not as cost effective by comparison with desalination of seawater. In fact, the federal government found that for every \$1.00 spent to build a reservoir/dam, the return on investment was only \$0.27. In addition, there are many other ramifications related to environmental issues, all associated with a reservoir/dam which are not a problem with desalination.

Hopefully, the water district will avoid legal implications and provide adequate water supplies during the forth coming drought period which is beginning a 20 year cycle.

Prepared by: Robert R. Doelle
Water Process Specialist
& Environmental Scientist

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May 17, 1988
Palo Alto, California
(revised #1)

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WATER USE PENALTIES TOWARDS PROGRESS

The water district is intending to levy penalties of a surcharge against any water user exceeding the allocated water limit established for a resident or designated water meter, rather than provide water from an alternative water resource.

It appears as though the water district is trying to offset the reduction in water useage with an increase in earnings which does not lead to an increase in service, i.e. provide additional water to meet public needs from an alternative resource and/or a means to develop alternative water resources for the users.

Is there a legal implication when a water supplier operates under a penalty surcharge to increase earnings when other alternatives exist to provide additional water at or below the surcharge rate?

Is there a violation of water user free choice when in the face of alternative water supply resources, the water district establishes a mandatory conservation policy which retains the profits of the water supplier?

If potable(drinking) water can be supplied from seawater at a cost impact which does not exceed penalty surcharges or an acceptable water rate increase of 10 to 25% by the users, does this constitute progress towards satisfying the water needs of the public and the constitutional rights of free choice in a free society?

No one wants a water district and/or the Public Utilities Commission dictating mandatory policies which violates free choice in the face of water resource alternatives.

Prepared by: Robert R. Doelle
Water Process Specialist
& Environmental Scientist

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May 20, 1988
Palo Alto, California

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OFFICE OF PLANNING



BUCKHORN CANYON PRESERVATION COUNCIL

6014 College Avenue, Oakland, CA 94618 415-653-6127

B . C . P . C . Advisory Council

David Brower
Director,
Earth Island Institute

Lucy Blake
Director,
CA League of
Conservation Voters

Richard Trudeau
Regional Parks
Association

Kathryn Petersen
Director, EBRPD

Harlan Kessel
Director, EBRPD

Malcolm Margolin
Author, Publisher

Ned Robinson
City of Lafayette
Councilmember

John Connors
City of Moraga
Councilmember

Susan Watson
Director,
Save Mount Diablo

Robert Walker
President,
East Bay Trails
Association

Andrew Cohen
Seth Adams
California Water
Policy Group

Organization names are for
identification purposes only.)

Water conservation is one of the most cost-effective solutions towards reducing demand. The City of San José is currently implementing an accelerated water conservation program to save 12 million gallons per day (mgd) by the end of 1988 at a total cost of \$5.5 million (see handout). The residential part of their retrofit program was started in the summer of 1986 with the goal of reaching 216,000 households¹ and saving 6.5 mgd at a cost of \$3.24 million. San José has had a 92% retrofit success rate due to good program design² and follow-up. If a similar program were implemented by EBMUD the savings in residential water use would be 10 mgd at a cost of \$5 million. Annual savings to EBMUD residential ratepayers would be \$5.5 million on water bills and \$7 million on energy bills.

The 1988 *Draft EIR* states on pages 7-8 through 7-13 that retrofit measures by 2020 could only save 2.7 mgd which is about half of the 5.3 mgd that EBMUD was projecting in 1985 (see 1985 *UWMP*, pg. VI-18). The *Draft EIR* also revised downward the total estimate of savings from all water conservation measures to 6.9 mgd which is almost a third of the 18.1 mgd from the same 1985 *UWMP*. On page 7-14 the *Draft EIR* claims unproven or uncertain success of water conservation, and further states:

If the district undertakes an aggressive series of intense water conservation measures more rigorous than those employed in the U.S. generally or in Northern or Southern California in particular, the area would be perceived as having a long term water deficiency. It is unlikely that this would have a positive effect on the region's economy.

I question the technical accuracy of the *Draft EIR* regarding the potential savings from an effective well-designed water conservation program, and question why EBMUD contradicts its own estimates from the 1985 *UWMP*. I cite the City of San José for having implemented one of the most aggressive and successful water conservation programs in California in particular and the U.S. in general, and ask the board to require that EBMUD seriously examine a more aggressive state-of-the-art water conservation program. Furthermore, I ask the board to require that EBMUD prioritize each planning option on a least-cost basis. An effective well-planned water conservation program should be a higher priority than flooding a pristine beautiful wilderness area like Buckhorn Canyon.

Sincerely,

Robert J. Mowris
Energy & Water Conservation Consultant

¹Originally they were only going to target pre-1980 households, but careful studies showed that 40% of houses and apartments built before 1987 had showerheads that did not comply with the 1978 CEC standard of 2.75 gpm. San José petitioned the CEC (see handout, pg. 11) and new regulations went into effect on Jan. 1, 1987. However a survey of 24 showerhead manufacturers during the summer of 1987 indicated that enforcement of the new regulations was lax.

²Each retrofit kit contained 2 chrome-plated brass showerheads (2.5 gpm) with on-off button, teflon tape, 2 stainless steel toilet dams, leak detection dye tablets, with instructions in English, Spanish, and Vietnamese, a sticker for the front window, and a postcard to send in for follow-up (cost was \$8/kit+\$3 labor+\$1 publicity+\$3 evaluation = \$15).

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WATER CONSERVATION AND RESOURCES
WASTEWATER FLOW REDUCTION
PRINCIPLES, GOAL AND STRATEGIES

I. Background

The Water Conservation, Wastewater Flow Reduction Program, was originated through the Department of Water Pollution Control and is now administered by the Office of Environmental Management. In addition, the office is addressing resources management needs and long-range planning through such activities as development of the 1985 Urban Water Management Plan.

The Water Conservation Work Program includes components to reduce demand for sewage treatment by approximately 12 million gallons per day (MGD). The program would reduce the demand projection for the year 1995 from 155 MGD to 143 MGD and could result in a four year deferral of the next expansion of the plant, from 1995 to 1999.

The City's short and long term strategies for achieving the 12MGD reduction are outlined on pages 4 and 5.

The largest reduction in the program will come from the Residential Retrofit Program which must be implemented and evaluated in time to allow the results to be "factored into projections of future demands," preferably prior to 1990 when an Engineering Study for the Second Stage Expansion would be initiated.

The Principles, Goals and Strategies identified below relate primarily to waste water flow reduction; additional items related to resources management are being developed.

II. Principles

1. San Jose considers water conservation to be an integral part of good water resource management and long-range water resource planning.
2. Water conservation programs should be designed to retain or improve quality of life in San Jose and enhance economic stability.

III. Goal

To reduce water demand to result in a 10% (12 MGD) reduction in projected wastewater flows to the Water Pollution Control Plant by 1995, using as a base the 1985 peak flow week of 124 MGD.

IV. Anticipated Benefits

On a present value basis, the City's cost for the Wastewater Flow Reduction Program component will be approximately \$4.5 million over the next ten years. Based on a recent benefit/cost analysis, the WPCP capital and operating costs will be reduced by \$68.6 million over this same period for a net savings of \$64.1 million. In addition to the savings to WPCP,

San Jose residents who participate in the program will save over \$46 million in energy and water costs. This program will result in total benefits to both the City and its residents of over \$100 million during the ten-year time frame.

The following table summarizes the total benefits to the area, including both the City and its residents. The City costs include the \$4.5 million program costs as well as \$10.2 million in anticipated revenue losses for energy and water over the next ten years:

	PRESENT VALUES	UNDISCOUNTED SUM
City Program Benefits	\$68,663,424	\$128,745,473
Participant Program Benefits	<u>\$46,481,981</u>	<u>\$74,863,301</u>
TOTAL BENEFITS	\$115,145,405	\$203,608,774
City Program Costs	4,505,263	5,407,000
City Revenue Loss	10,251,965	17,016,180
Customer Costs	<u>\$0</u>	<u>\$0</u>
TOTAL COSTS	\$14,757,228	\$22,423,180
Net Area Benefits	\$100,388,177	\$181,185,594
Benefit-Cost Ratio	7.80	9.08

WATER CONSERVATION AND RESOURCES
WASTEWATER FLOW REDUCTION
WORK PROGRAM
SHORT-TERM STRATEGIES (FY 1986-87)

RESIDENTIAL STRATEGIES

Residential Retrofit - to install water-saving devices in San Jose households:

- o Conduct analysis of pilot program
- o Submit evaluation report to council
- o Conduct retrofits in multi-family households
- o Implement first year of City-wide retrofit program
- o Obtain water retailers' assistance with retrofit program

COMMERCIAL AND INDUSTRIAL STRATEGIES

Business and Industry Program - to promote water conservation in business:

- o Institute awards program for business and industry, with WPCP
- o Promote business and industry conservation accomplishments
- o Investigate potential for further water conservation efforts in industry

INSTITUTIONAL STRATEGIES

In-City Conservation - to take a leadership role in demonstrating water conservation to the public:

- o Establish task force of representatives from City departments
- o Work with the City departments to revise Urban Water Management Plan and make recommendations to Council Environment Committee
- o Support efforts to reduce infiltration/inflow

Public Retrofit - to install water-conserving devices in public facilities:

- o Install retrofits in city facilities
- o Encourage retrofits in other public facilities
- o Establish data base for tracking installations and savings

Regulations - to monitor and update codes and regulations:

- o Present testimony on improved codes at California Energy Commission (CEC) hearings
- o Conduct activities as needed to encourage legislative support for water conservation codes

GENERAL EDUCATION STRATEGIES

Public Education - to promote public awareness of the need to conserve:

- o Work with retailers to produce bill inserts
- o Develop public service advertising
- o Develop materials to encourage flow and load reductions to WPCP
- o Establish Speakers' Bureau

RESEARCH AND EVALUATION

- o Prepare and present periodic status reports to the Council Environment Committee on progress toward meeting goals of the Wastewater Flow Reduction Program.

WATER CONSERVATION AND RESOURCES
WASTEWATER FLOW REDUCTION
WORK PROGRAM
LONG-TERM STRATEGIES (1986-1995)

RESIDENTIAL STRATEGIES

Residential Retrofit:

- o Complete City-wide program to retrofit 217,000 single and multi-family households
- o Continue to monitor and evaluate water use and sewer flows
- o Encourage and assist other WPCP cities and agencies with retrofit programs

COMMERCIAL AND INDUSTRIAL STRATEGIES

Business and Industry Program:

- o Investigate and implement incentives for conservation
- o Investigate and implement regulatory improvement

INSTITUTIONAL STRATEGIES

In-City Conservation:

- o Implement approved conservation activities within departments
- o Implement employee education program
- o Work with other agencies to prepare drought and emergency plans

Public Retrofit:

- o Complete retrofits in all city facilities
- o Revise procedures to assure retention of conservation devices
- o Encourage/assist other public facilities with retrofits

Regulations:

- o Monitor compliance rate and adherence to standards
- o Register incidences of non-compliance with state standards
- o Investigate and implement incentives for ultra-low-flow devices
- o Review City Code for consistency with water conservation goals

GENERAL EDUCATION STRATEGIES

Public Education:

- o Work with retailers to produce bill inserts regularly
- o Continue public service advertising
- o Conduct peak flow/load reduction program annually
- o Expand speaking engagements through Speakers' Bureau

RESEARCH AND EVALUATION

- o Study and implement, where feasible, alternative rate structures which offer incentives for water conservation
- o Research new technologies for commercial and industrial
- o Investigate and implement feasible applications of reuse and reclamation
- o Prepare and present periodic status reports to the Council Environment Committee on progress toward meeting goals of the Wastewater Flow Reduction Program.

CITY OF SAN JOSE

RESIDENTIAL RETROFIT PROGRAM

BACKGROUND

The Residential Retrofit Program is part of a multi-year plan to reduce wastewater flows and defer capital costs for expansion of the Water Pollution Control Plant. (sewage treatment)

The City has approximately 240,000 dwelling units. Those built before the recent plumbing code revision* for water-saving devices have the most potential for retrofit, approximately 217,000 units.

Pre-1980 homes will receive free delivery and installation of low-flow showerheads and toilet dams, along with conservation tips to reduce indoor water use.

Based on similar programs conducted in Phoenix, AZ, and Orlando, FL, the City anticipates a 75% installation rate, which is expected to reduce projected flows approximately 6 MGD.

PILOT RETROFIT

A Pilot Retrofit was the first step in the five-year Residential Retrofit Program. The pilot was implemented in July, 1986, in four residential areas, containing approximately 2,300 homes. The Pilot Retrofit Findings (Exhibit A) indicate the residents' response level. The Pilot Retrofit Program was successful in achieving a very high installation rate of 86%. Installation rates were determined by a field survey at the time of distribution and verified three months later through a random sample survey of pilot participants. San Jose citizens are responsive to installing the devices themselves, (97% of the participants installed the devices themselves), thereby keeping labor costs to a minimum. Results of the follow-up random sample survey conducted the months after the retrofit, indicated a 9% removal rate for the showerheads, 11% for toilet inserts. General consumer reaction was excellent. water use, and participants' responses to the program.

PHASE I CITY WIDE

In November the City initiated the first phase of its City Wide Program, retrofitting approximately 15,000 households. Approximately 2,000 of these were multi-family units retrofitted through a program for multi-family building owners and managers. For the single family component of 13,000 homes, a labor contractor was used.

PROGRAM IMPLEMENTATION

Publicity:

Because the first retrofit areas were relatively small, publicity efforts were limited to two direct mail pieces and media interest stories such as news, TV, and radio talk shows. Media interest was significantly greater than anticipated, generating at arate electronic and print media exposures.

*See "Petition to California Energy Commission", page 10. Code set flow rate standard at 2.75 gpm.

Two weeks before the program residents received a letter from the Mayor requesting their support. They received a reminder flyer the week before delivery of the kits.

Kits:

A formal bid process was used to select a vendor for the retrofit kits. Kits contained two showerheads, two toilet dams, two dye tablets, brochure, instruction sheet, and a window decal. Careful instructions were included in the kit for:

- o installing the hardware;
- o calling for recorded instructions;
- o ordering additional hardware for additional bathrooms;
- o returning unused hardware;
- o posting the decal.

Cost was under \$8 per kit.

Implementation:

An informal bid was used for the service contract. The contractor was responsible for administration of the program, including hiring, training, distribution, and installation where needed, particularly for the elderly and handicapped.

Installation crews went house-to-house in the target areas to deliver the retrofit kits. They then made up to three follow-up visits, working some evening and weekend hours to accommodate as many households as possible. Crews covered assigned areas, installing hardware and leaving mail-back cards at unanswered doors. Call-backs were arranged through the contractor and scheduled as rapidly as crews were available.

As the installation crews moved through the neighborhoods offering installation help, they recorded numbers of installations and refusals and collected partially used or returned kits. The response of the pilot communities was notably enthusiastic.

Page 9, Pilot Retrofit Findings, indicates the residents' response level and the corresponding reduction in waste water flows. Crews contacted, either by direct personal contact, or through resident use of a window decal signifying installation, a total of 1634 households (71%) of the 2310 households receiving kits. Of those contacted, 1401 households (86%) had installed all or part of the kit. At the time of contact, 98 residents (6%) were undecided about using the kit, 111 residents (7%) refused to participate, and 24 homes (1%) already had water-saving devices for the whole household.

Note: Many participants in the program had some water-saving devices but still used part of the kit to complete the household retrofit.

These results ran almost parallel to the results obtained in Phoenix, AZ, the only other city where the same method of delivery and installation was used. This method achieved the highest installation rates in the country, outstripping even direct installation programs, which cost more than twice as much as the San Jose program and usually achieve only 60% installation rate.

Wastewater Monitoring:

Flows were measured before and after the retrofit. Pre-retrofit data was collected in October, 1985, and April, 1986, as well as the week prior to the retrofit program. Post-retrofit data was collected for two weeks after the installation of water saving devices was assumed to be completed. The flow reduction was determined by averaging all the pre-retrofit data and comparing it to the post-retrofit data.

Summary

The Pilot Retrofit Program was successful in achieving a very high installation rate of 86%, well beyond the anticipated high installation rate of 75%. San Jose citizens are responsive to installing the devices themselves, (97% of the participants installed the devices themselves), thereby keeping labor costs to a minimum. In addition, preliminary analysis has demonstrated a quantifiable reduction in wastewater flows, of 22.6 gallons/day, per household. Additional analysis will assess reductions in winter water use, which is expected to substantiate the demonstrated flow reductions.

Random sample surveys will be conducted periodically to determine citizen satisfaction with the devices and to identify reasons for non-participation or removal of devices after installation.

NEXT PHASE

Now that the installation phase of the pilot retrofit has been completed, Water Resources staff are focusing on implementation of the multi-year program. The City is retrofitting 15,000 households in FY 87, in addition to the 2,300 reached with the pilot. During FY 88-91, the program will be expanded until all 217,000 homes are contacted.

CITY OF SAN JOSE
PILOT RETROFIT FINDINGS

I. TOTAL RETROFIT AREA (2310)

<u>DESCRIPTION</u>	<u>NUMBER</u>	<u>FIELD SURVEY</u>
Decals	360	16%
Contacted in person	1274	55%
SUBTOTAL	1634	71%
No contacts	649	28%
Vacancy	27	1%
TOTAL HOUSEHOLDS	2310	100%

II. CONTACTED HOUSEHOLDS

(Field Survey - 1634;
Sample Survey - 208)

<u>DESCRIPTION</u>	<u>NUMBER</u>	<u>FIELD SURVEY</u>	<u>SAMPLE SURVEY</u>
Households installed	1401	86%	84%
Households undecided (no response)	98	6%	(9)
SUBTOTAL	1499	92%	93%
Households refused	111	7%	7%
Households with existing low-flow devices	24	1%	N/A
SUBTOTAL	135	8%	7%
TOTAL HOUSEHOLDS CONTACTED	1634	100%	100%

EXHIBIT BCITY OF SAN JOSE
PHASE I RETROFIT FINDINGSI TOTAL RETROFIT AREA (12,960)

<u>DESCRIPTION</u>	<u>NUMBER</u>	<u>FIELD SURVEY</u>
Decals	1005	8%
Contacted in person	7852	60%
SUBTOTAL	8857	68%
No Contacts	4110	32%
TOTAL HOUSEHOLDS	12960	100%

II. CONTACTED HOUSEHOLDS (8857)
(Field Survey - 8857;
Sample Survey - 415)

<u>DESCRIPTION</u>	<u>NUMBER</u>	<u>FIELD SURVEY</u>	<u>SAMPLE SURVEY</u>
Households installed	7882	89%	92%
Households undecided	179	2%	N/A
SUBTOTAL	8061	91%	92%
Households refused	620	7%	8%
Households with existing devices	176	2%	N/A
SUBTOTAL	796	9%	8%
TOTAL HOUSEHOLDS CONTACTED	8857	100%	100%

CITY OF SAN JOSE

PETITION TO CALIFORNIA ENERGY COMMISSION

RULEMAKING ON PLUMBING FIXTURES

BACKGROUND

This petition, co-sponsored by East Bay Municipal Utility District, requested that the Commission disallow the use of removable restrictors in showerheads. The frequent removal of restrictors has resulted in an estimated 40% rate of non-compliance with the state standard of 2.75 gallons per minute for showerheads.

ANALYSIS

This non-compliance means that expected water savings in new construction, retrofits, and code enforcement are not occurring. Our staff has estimated City of San Jose losses from unrealized water and energy savings since 1978, as follows:

- o 2.2 billion gallons of water, valued at \$2,607,360;
- o 9.4 million therms of natural gas, valued at \$4,017,762;
- o 11.4 million kwh of electricity, valued at \$737,704;
- o \$1,269,328 in sewage treatments costs;

Total costs: \$8,632,154*

These losses are estimated to produce an additional 1.3 million gallons per day of water required to be treated at the Water Pollution Control Plant. These losses are shown on the Table I, "Power and Water Losses from Unrealized Savings in Water-Saving Showerheads, Statewide Estimates"; page 12. The losses to the state over the past seven years of non-compliance are estimated at over \$290 million. The method of calculating these losses is shown in Table II, page 13.

RECENT ACTIONS

There were several hearings on this petition beginning in September, 1985. At each hearing, major out-of-state showerhead manufacturers opposed the petition. They objected to making the manufacturing changes that full compliance with the code would imply. However, non-compliance means that the water savings expected by the code do not occur.

Water Resources staff worked closely with the City's Legislative Representative, Roxanne Miller-Mosley, and gained the support of other water agencies, municipalities and the State Department of Water Resources. The only California manufacturer to take a position on this issue, Energy Technology Laboratories of Modesto, also supported the City's position.

*1985 Dollars

Although the adopted changes were not as stringent as the City proposed, the City's efforts resulted in action being taken by the Commission that considerably strengthened the existing regulations.

The Committee Report adopted by the Commission initiates the following changes in the plumbing fitting (showerhead) regulations:

1. Requires that showerheads sold in the state have flow-restricting mechanisms that are mechanically retained with a minimum force of eight pounds¹.
2. Requires that restrictors be mechanically retained in the showerhead from the point of manufacture. (This should eliminate the current problem of separately packaged restrictors.)
3. Mandates labelling of both packaging and actual showerheads so that consumers and inspectors can determine specific models and compliance with state standards for flow rates.
4. Requires that testing laboratories be approved by the Executive Director of the CEC².

In addition, the Commission has directed its staff to do more frequent inspection of products by random retail sampling, an effective indicator of actual compliance.

Furthermore, supporting manufacturers have indicated that the City's strong position on this issue, coupled with its extensive communications with other agencies and organizations, has already caused several manufacturers to consider voluntary use of permanent restrictors. This is due to their belief that the City's position is an indicator of future market demands.

¹ The City proposed permanent restrictors.

² The City proposed requiring independent testing laboratories.

TABLE I
STATEWIDE ESTIMATES
POWER AND WATER LOSSES FROM UNREALIZED
SAVINGS IN WATER-SAVING SHOWERHEADS

CUMULATIVE COSTS
1979-1986

	a (b ¹ x 7.2 gpd ² x 365 days) /1,000,000 CUMULATIVE WATER LOSSES	b (b x 12.0 ³ THERMS x 95% ⁴) GAS WATER HEATER USE = GAS ENERGY LOSSES	c (b x 275 KWH ⁵ x 5% ⁶) ELECTRIC WATER HEATER USE = ELECTRICITY ENERGY	d GALS OF WASTE- WATER TREATED DUE TO UN- REALIZED WATER SAVINGS	e TOTAL LOSSES
SAN JOSE	2,172.8 MGal	9,391,684 therms	11,368,527 kwh	2,172.8 MGal	
1985 PRICES FOR LOCAL AREA	.0012/gal	.4278/therm	.06489/kwh	584.19/MGal	
1. VALUE OF LOSSES @1985 PRICES	\$2,607,360	\$4,017,762	\$737,404	\$1,269,328	\$8,632,154
STATE OF CALIFORNIA	81,262.7 MGal ⁷	351,248,982	425,182,910	81,262.7 MGal	
1985 PRICES	.0012/gal ⁹	.47/therm ⁸	.082/kwh ⁸	584.19/MGal ⁹	
VALUE OF LOSSES	\$97,515,240	\$165,087,022	\$34,864,999	\$47,472,857	\$344,940,118

1. See Table II
2. Water saved with low-flow showerhead, 1984 HUD Study
3. Therms of gas saved with low-flow showerhead, 1984 HUD Study
4. Est. percentage of gas water heaters
5. Kwh of electricity saved with low-flow showerhead,
1984 HUD Study

6. Est. percentage of electric hot water heaters
7. Based on ratio of state population to San Jose
population, 37.4:1
8. CEC Staff Price Forecasts, 1985
9. San Jose area costs

TABLE II
CITY OF SAN JOSE
POWER AND WATER LOSSES FROM UNREALIZED
SAVINGS IN WATER-SAVING SHOWERHEADS

a	b	c	d	e	f	g	h	i	j
AREA POPULATION ¹	BASE = 1979 POP. ³ 15	POP. INCREASE FROM PREV. YEAR	=b+c TOTAL POP. REPLACING SHOWERHEADS	d x .40 ⁴ % W/NON COMPLYING SHOWERHEADS	ACCU. OF POP. W/NON COMPLYING EACH YEAR	(f x 7.2 gpd x 365 days)5 /1,000,000 WATER LOSSES EACH YEAR	f x 12.06 ⁶ THERMS x 95 ⁷ % GAS WATER HEATER USE = GAS ENERGY LOSSES	f x 275KW ⁸ x 5.9% ELECTRIC WATER HEATER USE = ELECTRICITY ENERGY LOSSES	GALS OF WASTE- WATER TREATED DUE TO UN- REALIZED WATER SAVINGS (g)
1978	587,689	-	-	-					
1979	607,869	40,525	20,180	60,705	24,282	24,282	63.8 MGal	276,815	63.8 MGal
1982	629,546	40,525	21,677	62,202	24,881	49,163	129.2 MGal	526,000	129.2 MGal
1981	645,821	40,525	16,275	56,800	22,720	71,883	188.9 MGal	819,466	188.9 MGal
1982	661,721	40,525	15,900	56,425	22,570	94,453	248.2 MGal	1,076,764	248.2 MGal
1983	672,824	40,525	10,563	51,088	20,435	114,888	301.9 MGal	1,309,723	301.9 MGal
1984	684,351	40,525	12,067	52,592	21,037	135,925	357.2 MGal	1,549,545	357.2 MGal
1985	696,021	40,525	11,670	52,195	20,878	156,803	412.1 MGal	1,787,554	412.1 MGal
(est.)									
1986	712,000	40,525	15,979	56,504	22,602	179,405	471.5 MGal	2,045,217	471.5 MGal
TOTAL LOSSES:						2,172.8 MGal	9,391,684	11,368,527	2,172.8 MGal
						OF WATER	THERMS OF GAS	KWH OF	OF WATER
1985 PRICES FOR						SUPPLIED		ELECTRICITY	TREATED
LOCAL AREA:						.0012/GAL	.4278/THERM	.06489/kwh	584.19/MGal
VALUE OF LOSSES									
@1985 PRICES:						\$2,607,360	\$4,017,762	\$737,404	\$1,269,328
TOTAL VALUE OF LOSSES									\$8,632,154
@1985 PRICES:									

1. State Dept. of Finance

2. Census

1. State Dept. of Finance
2. Census
3. Based on 15-year life of showerhead
4. Estimated non-compliance rate, CEC Committee Hearings/Survey
5. Water saved with low-flow showerhead, 1984 HUD Study
6. Therms of gas saved with low-flow showerhead, 1984 HUD Study
7. Estimated percentage of gas hot water heaters; local area
8. Kwh of electricity saved with low-flow showerhead, 1984 HUD Study
9. Estimated percentage of electric hot water heaters, local area

RECEIVED

JUN 14 1983

OFFICE OF PLANNING

BUCKHORN
 PRESENTATION TO E.B.M.U.D. BOARD
 Kaiser Auditorium 7:30 PM May 25, 1988
 William Dabel, Mayor of Orinda

I am from a fourth generation bay area family. My grandfathers and my father looked to the future to prepare space and utilities for me. I have four kids. There has to be space and utilities for them. (no drawbridge thinking)

Some countries in the world:

You apply for a telephone and wait years. or

There is insufficient gas supply for new customers, or

There are regular power brown outs

We don't have these problems; Our utility companies have done well to keep up with demand.

We have transportation problems. To come here from Orinda should take 10 minutes but sometimes it takes 30 minutes. 20 minutes lost because we didn't keep up with road construction. We truly slipped on transportation.

You the EBMUD board have done very well with water. 9 years out of 10 you have all we need. Once every 10 -20 years we seem to have a drought.

Well, I don't like 25% reductions and threats of greater reductions every drought.

3

You can take the sting out of the drought and even reduce the chance of water shortage during earthquake disaster by building terminal reservoirs.

6

Most wet years you spill surplus water and let it go out to the ocean. You need the storage to save it for the drought years. That's what your citizens want.

6

I am in the kitchen in Orinda taking the heat on planning, street, police and etc. You are in the laundry room in hot water. Bite the bullet and build the terminal reservoirs you need.

Don't let the Stop everything Club or assorted stop everything people deter you. Their elevators don't always run to the top floor. You have got to keep your act together in spite of them hacking at you.

At a town meeting in Orinda on WATER on Wednesday May 18th, I asked for a show of hands concerning the construction of Buckhorn. 88% of the people favored it. My telephone calls are running even higher for terminal reservoir construction, (and fair rates).

As a U.C. Berkeley Civil Engineer who majored in water, as a Mayor who hears what his constituents are saying, I come here tonight to tell you BUCKHORN IS NEEDED, BUCKHORN IS WANTED.

LAW OFFICES OF
JACKSON, TUFTS, COLE & BLACK

A PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

DAVID AYERS THOMPSON
PARTNER

650 CALIFORNIA STREET
SAN FRANCISCO, CALIFORNIA 94108
(415) 433-1950
TELEX II 9103 722168
FACSIMILE III (415) 392-3494

SAN JOSE OFFICE
60 SOUTH MARKET STREET
10TH FLOOR
SAN JOSE, CALIFORNIA 95113
(408) 998-1952 (415) 494-1950

June 13, 1988

RECEIVED

JUN 14 1988

OFFICE OF PLANNING

Mr. Richard Kolm
Assistant Chief Engineer
for Planning
2127 Adeline Street
Oakland, CA 94623

Dear Mr. Kolm:

I am a resident of Moraga and have made efforts to educate myself with respect to the benefits and burdens of the proposed Buckhorn Reservoir. Based upon information available to me, I have concluded that I am opposed to the proposal due to environmental and seismic considerations. Thank you for taking into consideration my opinion.

Sincerely,

David A. Thompson
David A. Thompson

DAT7F/mjb/53

21

June 11, 1988

RECEIVED

JUN 14 1988

OFFICE OF PLANNING

Richard L. Kolm
Asst. Chief Engineer for Planning
EBMUD P.O. Box 24055
Oakland, Ca. 94623

Dear Mr. Kolm,

We have studied your "Summary of Water Supply Management Program" dated April 1988. Clearly, some actions must be taken to protect our water supply. However, we feel that doubling terminal storage is a step that should be approached very deliberately and only as a last resort. We do favor the other steps you have outlined to help extend and assure supply and to improve quality.

We feel the following steps should take priority:

1. Continue to improve aqueduct integrity. If aqueduct life is expected to be greater than 100 years as you state, and replacement with a new seismically resistant line is \$ 265 million, several million dollars in up-grading existing lines is justified. (12)
2. Set a goal to reduce the projected 13-month emergency outage on the aqueducts. The objective is to have a plan in place and ready to go. Perhaps some materials and supplies should be stockpiled. (7)
3. Keep terminal reservoirs as full as possible year around. (10)
4. Establish conservation as a continuing goal. We note that in 1983 outdoor water use was 19 percent of the total demand, and this area should be a prime target for reduced use. We feel a curtailment figure somewhat greater than 25 percent should be established for emergency shortages. (3)
5. Avoid any annexations beyond those legally required. (2)

Finally, we feel the terminal reservoir proposal requires more study than is evident from your publications. We are particularly concerned with the seismic safety and ecological loss associated with the Buckhorn location. Should a reservoir prove necessary in the long-run, we would like to see a more thorough going study before a site selection is made. (23)

Sincerely,

VH Gunther
Victor H. Gunther

Edna E. Gunther
Edna E. Gunther

(21)



WEST CONTRA COSTA COUNTY GRAY PANTHERS

1019 McDonald Ave.
Richmond, California 94804
Telephone (415) 232 5698/236 5687

RECEIVED

JUN 14 1988

SECRETARY'S OFFICE

June 13, 1988

RECEIVED

JUN 14 1988

OFFICE OF PLANNING

Dear Director,

Your staff is proposing to build Buckhorn Dam mainly for two reasons:

1. The damage that an earthquake or flood might do to the Delta area aqueduct.
2. To provide back-up storage for water against future drought.

Each of these "reasons" is made vulnerable by the following information.

Regarding the first, the proposed dam would sit within five miles of the Hayward Fault on the West and within seven miles of the Calaveras Fault on the east. (These are two of the most dangerous faults in Northern California.)

In the present state of technology there can be no guarantee of the safety of any dam. The U.S. Geological Survey in 1981 estimated that the "probable potential deaths" resulting from the failure of Upper San Leandro Dam could be between 33 & 39,000 persons, depending upon the time of the day or night. Failure of the proposed Buckhorn Dam would add three times the amount of its water to the Upper San Leandro reservoir. (21)

The EBMUD staff estimates on the length of time required to repair damage to the aqueduct are questionable, particularly regarding the emergency work schedule. (7)

Regarding the second "reason", there is still much room for improvement in EBMUD water conservation, in contrast with the San Jose program. (10)

cont.



WEST CONTRA COSTA COUNTY GRAY PANTHERS

1019 McDonald Ave.
Richmond, California 94804
Telephone (415) 232 5698/236 5687

June 13, 1988

page 2

Furthermore, Delta back-up water supply has been under-rated as a source of supply. (10)

In conclusion, we feel we are being asked to seriously consider a water empire expansion ~~and~~ at ³costs virtually incalculable.

Flooding 1,100 acres of prime land and obliterating all natural life thereon is an alternative beyond consideration, in our opinion. (22)

Sincerely,

Fancheon Christner
Fancheon Christner

Sources of our information include:

1. Water Supply Mgmt Program Summary 4/88/EBMUD
2. Research by our consultant M.N.MCK

June 13, 1988

RECEIVED

JUN 14 1988

OFFICE OF PLANNING

Dear Sirs,

This letter is in reference to the Water Supply Management Program EIR. Below are my comments.

The area in which Buckhorn Reservoir is proposed to be built represents important open space. This area should remain natural to serve as habitat for the biotic resources that live there. This is especially urgent since open space is fast being developed in this area. (22)

Building a water impound project (Buckhorn) will not only destroy the site that the reservoir is located on but will also contribute to the development of other non-developed areas by providing water. (Calling it a back-up supply, emergency supply, etc. simply means that there is more water to exploit and waste). Consequently much more than the proposed reservoir site is destroyed. (24)

All non-environmentally destructive measures should be implemented to their fullest before any new water supplies are added. The American river diversion is another example of a new water project being used to feed the growth of a region (East Bay) at the expense of an already heavily used resource. (10)

The East Bay Municipal Utility District could become a leader and champion of water conservation, if it chooses to do so instead of just another regional agency that goes along with the attitude that more is better. Thank you for allowing me to comment on these important issues. (10)

Sincerely,
Scott Weston
79 Burgos Ct.
San Ramon, CA

94583

June 13, 1988

RECEIVED

JUN 14 1988

SECRETARY'S OFFICE

EBMUD Board of Directors
P.O. Box 24055
OAKLAND, CA 94623

Dear Board Members -

I wish to go on record Girmly opposed
to the Buckhorn Reservoir project.

I suggest EBMUD explore the many options
available besides building an expensive reservoir and
changing our environment and open space.

Water conservation, water reclamation, water marketing -
all are realistic, all are inexpensive and none are
environmentally destructive. (10)

Water from the Delta is also a viable
alternative in years of water shortage or damage to
our Mokelumne River aqueduct - (10)

Please manage our water resources and land
compatibly - Do NOT Build Buckhorn Reservoir -

Paul V. Buero, 1151 Sanders Drive, Moraga, CA 94556

June 9, 1988

Rita and Fred Keeperman
143 Hazelwood Place
Moraga, Ca. 94556

EBMUD Board of Directors
P.O. Box 24055
Oakland, Ca. 94623

RECEIVED

JUN 14 1988

SECRETARY'S OFFICE

Directors of EBMUD:

We are writing to voice an emphatic "no" to the proposed Buckhorn Canyon reservoir. There are so many reasons why this site is undesirable, most of which you are no doubt well aware.

The impact on the town of Moraga and its citizens is one of disruption and destruction. The construction of a pipeline along three of Moraga's major roads is of a scale hard to imagine. Add to that the presence and operating noise of a proposed pumping station at St. Mary's Road and Rheem Blvd. The town would thus have a permanent reminder of the scars on the community which are being recommended by EBMUD.

Despite these far from minor inconveniences, the biggest opposition to Buckhorn Reservoir must come in the form of environmental concerns. We are most anxious about the effect such a large body of water would have on the future climate of our area. Sierra Club studies have shown that the temperature in Moraga would be 10-12 degrees less than it is now. This is totally unacceptable. There are also questions concerning unstable soils, destruction of wildlife, disturbances of natural habitat, possible dam failure, and other irreparable changes which have not been answered satisfactorily.

It is time for the directors of EBMUD to show that they represent people in all communities and to take their concerns into account. There are other alternatives to Buckhorn Reservoir - we request that these be implemented.

Sincerely,

Rita Keeperman

Rita Keeperman

Fred Keeperman
Fred Keeperman

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RECEIVED

JUN 14 1988

SECRETARY'S OFFICE

Ralph B. Hogan, Jr.
759 Crossbrook Drive
Moraga, Ca 94556

June 9, 1988

EBMUD Board of Directors
P. O. Box 24055
Oakland, Ca 94623

Dear Board of Directors:

I urge you to preserve Buckhorn Canyon and to work towards viable water management alternatives instead of such destructive water development projects.

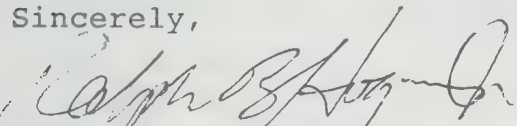
The enormous cost of this project, the loss of valuable urban open space, the growth-inducing impacts of a reservoir that would double the District's current water storage suggests that alternatives should be considered such as development of Los Vaqueros Reservoir. The development of this reservoir would not disrupt an entire community that has only two narrow winding roads out of the area. The safety and quality of life during and after the construction of the proposed Buckhorn dam should be cause for EBMUD to chose more suitable sites for building a dam.

22

29

19

Sincerely,


Ralph B. Hogan, Jr.

July 1988

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

RECEIVED

JUN 14 1988

SECRETARY'S OFFICE

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

and

3

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

Very truly yours,

Mr & Mrs Thomas J Connolly

SIGNED

MRS THOMAS J CONNOLLY
LAS CASCADAS
OAKLAND, CA 94663

18673 Reamer Road
Castro Valley, California 94546

June 11, 1988

RECEIVED

JUN 14 1988

OFFICE OF PLANNING

Mr. Richard L. Kolm
Assistant Chief Engineer for Planning
EBMUD
P.O. Box 24055
Oakland, California 94623

Dear Mr. Kolm:

Re: Water Supply Management Program

After reviewing the Water Supply Management Program Technical Report and Draft Environmental Impact Report, the following questions and comments should be answered or considered.

TECHNICAL REPORT:

1. A great deal of concern is expressed about the security of the cross-delta aqueducts, but the corrective action plan and its financial commitment are not given much support. There is more concern about customer landscaping losses (Page II-16). If a major earthquake were to cause extensive damage, people would be more concerned about the costs or repairing their homes rather than their landscaping. (15)

A much stronger effort should be put into the security program to protect the aqueducts.

2. Figure III-28 is a district map comparing existing and new connection water uses. In all areas the projections of all new connections are for about 30% increased use. These figures do not make sense when on Page A-2, an incentive plan is proposed for low flow, low use household plumbing and low water use plantings. (4)

Why can't this program be made a mandatory condition for connection for all new units? If existing households have the indicated level of water use with their old plumbing, it certainly would not be too much to expect all new plumbing to use less water.

3. On Page V-11, the comment is made that a Delta Treatment Plant would cost \$370 million. No mention is made about capacity, final water quality comparisons, or any specific information. (11)

Since American River water may never be diverted from Folsom South Canal to EBMUD, I would like to recommend that the District study the following alternative:

Develop the design for a 10 to 20 MGD ozone and activated carbon water treatment facility for delta water, whose output would then be blended into Mokelumne River water. (11)

The plant could be operated at maximum capacity in winter and spring, when delta water quality can be at its best. In summer when delta water quality is lower, the throughput could be reduced accordingly.

The plant design should be flexible and capable of being

expanded in similar sized units as increased demand requires.

The design should use "industrial plant construction" instead of "permanent concrete".

The package unit design allows revisions in water processing as new technology evolves without major plant construction.

The small unit approach would avoid the large up front capital expenditures proposed in your report.

4. The District's conservation effort should have stronger direction towards plumbing code requirements and toilet replacement programs. What is the cost comparison for toilet rebates or replacement per MGD saved versus reservoir and aqueduct cost per MGD? Should the District have rebates of \$100 or more to increase user interest? The per household cost of the new terminal reservoir is going to be about \$1000 in principal and interest by the year 2020.

COMMENTS ON EIR:

1. On Page 5-94 (Loss of Riparian Habitat) the statement is made to consult California Dept. of Fish and Game and the U.S. Fish and Wildlife Service for development of a mitigation plan that will meet their goals and objectives. EBMUD should not put the burden of mitigation on these two agencies. The burden of mitigation performance is on EBMUD.

All riparian and stream mitigation has to be in place and operating effectively before any destruction and construction begins. There have been too many wild promises on mitigation which have not worked, and as a result wildlife and plants have been lost.

It could take 5 to 20 years to determine if mitigation is operating effectively.

2. In 1983, the California Legislature passed State Senate Concurrent Resolution No. 28. This resolution was the Legislature's recognition of the importance of wetlands with the "intent to preserve, protect, restore and enhance California wetlands and the multiple resources which depend on them". The resolution goes on to say that the goal is to increase wetland acreage by 50% by the year 2000.

Converting a riparian habitat to a lake bottom does not increase the in-kind wetland acreage or its value.

The Plant List (Appendix DI) does not show Poison Oak, one of the area's most abundant plants.

A general comment about the EIR. The EIR was written in a style and manner to justify the construction of the new terminal reservoirs.

Sincerely yours,

Frank G. Delfino
Frank G. Delfino

c.c. California Dept. of
Fish and Game

U.S. Fish and Wildlife
Service

RECEIVED

JUN 15 1988

OFFICE OF PLANNING

JUNE 13, 1988

RICHARD L. KOLM
ASST. CHIEF ENGINEER FOR PLANNING
EBMUD PO BOX 24055
OAKLAND, CA 94623

DEAR MR. KOLM,

THIS IS A RESPONSE TO THE PROPOSAL
FOR TERMINAL STORAGE EXPANSION, SPECIFICALLY,
BUCKHORN CANYON.

IN THE SUMMARY OF THE WATER SUPPLY
MANAGEMENT PROGRAM, APRIL 1988, THERE
IS A PANEL ON THE FIVE FUNCTIONS OF
TERMINAL STORAGE. THERE IS ANOTHER, AND
PERHAPS, PRIMARY FUNCTION OF TERMINAL STORAGE.
TERMINAL STORAGE ALLOWS AND SUPPORTS
EXTENSIVE HUMAN SETTLEMENT. ADDITIONAL
TERMINAL STORAGE, SUCH AS PROPOSED AT
BUCKHORN, ALLOWS, SUPPORTS AND, IN FACT,
ENCOURAGES AN EXPANSION OF HUMAN
SETTLEMENT PATTERNS AND ADDITIONAL
LAND DEVELOPMENT.

MY POINT: THE CONSTRUCTION OF A
RESERVOIR AT BUCKHORN WOULD ACTUALLY
BE A DISSERVICE TO THE DEVELOPERS AND
PROMOTERS OF GROWTH.

AN INCREASE IN THE AVAILABLE WATER SUPPLY
FOR THE SAN RAMON VALLEY WOULD BE
AN UNFORTUNATE DISSERVICE TO THE DEVELOPERS
THERE. THIS IS A PARADOX.

WHAT THE DEVELOPERS AND, IN FACT, EVERYONE
WOULD LOSE IS THE OPPORTUNITY FOR
INNOVATION IN CONSERVATION.

THIS TRANSLATES INTO OVERALL LAND USE
PATTERNS, AS WELL AS, INDIVIDUAL RESIDENTIAL USE.

I AM AGAINST THE PLAN FOR THE
CONSTRUCTION OF A DAM AND RESERVOIR
AT BUCKHORN CANYON.

I AM NOT AGAINST GROWTH OR DEVELOPMENT.
IT IS A QUESTION OF THE QUALITY OF DEVELOPMENT.
I HAVE FAITH IN PEOPLES ABILITIES FOR
INNOVATION AND CREATIVITY.

NEW DEVELOPMENT SHOULD REFLECT THE
REALITY OF LIVING IN A SEMI-DESERT
AREA. IN NEW DEVELOPMENT THERE
COULD EASILY BE A MANDATE FOR
NON-WATER USING TOILETS AND
WATER-CONSERVING LANDSCAPES.

(10)

A PERSONS RIGHTS AND FREEDOM STOP
WHEN THEIR ACTIONS THREATEN THE
RIGHTS OF OTHERS. I FEEL THREATENED
WHEN PEOPLE FEEL THEY SHOULD HAVE
UNLIMITED ACCESS TO A LIMITED RESOURCE.

THE WATER DELIVERY SYSTEM IS
PART MACHINE AND PART LIVING BIOLOGICAL
SYSTEM. THE QUESTION IS: DO ~~ARE~~ OUR
SOCIAL AND ENVIRONMENTAL PATTERNS RESPOND
TO NATURAL FORCES (LIVING IN A SEMI-DESERT)
OR ARE WE DRIVEN BY TECHNOLOGICAL
MOMENTUM (BUILDING A BIGGER MACHINE)?
PLEASE KNOW THE DIFFERENCE BETWEEN
WHAT IS FEASIBLE AND WHAT IS
DESIREABLE.

(10)

I USE ABOUT 40 gpd.

I'M TRYING TO USE LESS.

CARLOS P. BEAR

1274 61ST ST

EMERYVILLE, CA 94608

UNIVERSITY OF CALIFORNIA

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



SANTA BARBARA • SANTA CRUZ

COLLEGE OF NATURAL RESOURCES
 AGRICULTURAL EXPERIMENT STATION
 GIANNINI FOUNDATION OF AGRICULTURAL ECONOMICS
 DEPARTMENT OF AGRICULTURAL & RESOURCE ECONOMICS

207 GIANNINI HALL
 BERKELEY, CALIFORNIA 94720

June 10, 1988

RECEIVED

JUN 15 1988

OFFICE OF PLANNING

Mr. Richard L. Kolm
 Assistant Chief Engineer for Planning
 EBMUD
 P. O. Box 24055
 Oakland, California 94623

Dear Mr. Kolm:

I am enclosing with this note a short paper, a set of comments on EBMUD's Technical Report on Water Supply Management.

These comments are offered in a spirit of constructive cooperation, and I look forward to productive interaction with EBMUD's staff and Directors.

Thank you for your consideration.

Sincerely,

Anthony C. Fisher
 Professor

ACF:mpm

Enclosure

EBMUD'S WATER SUPPLY MANAGEMENT PROGRAM:
SOME COMMENTS ON THE TECHNICAL REPORT

by

Anthony C. Fisher*

Introduction

In this note I offer some comments on EBMUD's Water Supply Management Program, as outlined in the Technical Report of April, 1988.

It seems fair to say that there are essentially two purposes, or objectives, of the program: (1) security (of the Mokelumne Aqueducts in the Delta against earthquake and/or flood damage) and (2) mitigation or elimination of shortages in the short run (drought) and/or the long run (gradually increasing demand). Maintenance of water quality plays a role in both. I believe the Technical Report admirably identifies and spells out a wide range of alternatives for achieving both. I also believe that some of these alternatives should be given greater weight in the Report's conclusions and recommendations.

Security

Let us look first at security. Note that, in the event of aqueduct failure, replacement of the existing lines would be needed. Construction of additional terminal storage, the Report's preferred alternative, is in itself not sufficient and, indeed, not necessary. Since the cost of aqueduct replacement would be incurred in any case, why not simply do this, i.e., build a secure system through the Delta (or around it if further engineering estimates suggest this might be cheaper)?

*Professor of Agricultural and Resource Economics, University of California at Berkeley.

Further, this alternative allows for some flexibility, and a phased-in construction program, thereby reducing the present value of costs. Aqueduct No. 1, older and less able to withstand even relatively moderate shaking or flooding, could and should be replaced first. This is a project that probably ought to be started immediately. Note that it does not need to wait on resolution of the dispute concerning American River water. This would determine the timing and especially the sizing of replacements for Aqueducts No. 2 and No. 3.

Shortages

Let us now consider the problem of shortages. The Report, again, comes down in favor of additional terminal storage and, in particular, construction of the Buckhorn Reservoir. I believe a better (less costly and less environmentally damaging) solution would involve changes in water marketing and pricing. Extra supply from the American River (whether above the confluence with the Sacramento River or just below) would also be helpful. Finally, if additional terminal storage were still needed--and I am somewhat skeptical, especially if the indicated aqueduct security measures are taken--Los Vaqueros would seem to be a better alternative than Buckhorn.

Water marketing, or sales from relatively low-value uses such as irrigation to high-value uses such as municipal drinking water, has been proposed as a way of improving efficiency in allocation of California's water generally. One obstacle has been the need to negotiate across water districts as, for example, in the case of the Metropolitan Water District and the Imperial Irrigation District in southern California. This obstacle should be lower, for EBMUD, if it vigorously pursues the identified alternative of trading with the Woodbridge Irrigation District for water from its own (EBMUD's) Camanche Reservoir. In fact, it is not even clear that EBMUD needs to offer alternative

water to Woodbridge. EBMUD municipal users currently (even before the new June 1 rates) pay far more for water than Woodbridge farmers. Essentially, all that is needed is to offer some--or all--of the difference to the farmers, at least during a dry year. Some would take marginal irrigated land out of production for that year; some would switch to less water-intensive crops, some would adopt water-saving irrigation methods, and so on.

Water marketing alone might solve the shortage problem. If it does not, or until it can do so, a change in EBMUD's own water pricing can be effective. Again, EBMUD has not only identified this alternative but is aggressively--and correctly, in my judgment--pursuing it. I am referring, of course, to the sharply increasing block rates adopted as of June 1. One may argue about details of the structure; for example, I believe the higher rates should start at higher levels of consumption for users east of the hills in central Contra Costa. But the policy of sharply increasing block rates seems essentially correct. Further, there is evidence, from experience with the 1977 drought, that it will be effective in substantially reducing water consumption. At that time, I believe only a two-tier structure was imposed, with use in the second tier or block priced 100 percent above use in the first. As noted in the Report, this was associated with an approximately 40 percent reduction in use. Admittedly, the increase in rates was accompanied by a vigorous campaign to inform and persuade people of the need to conserve water, and it is difficult to disentangle the effects of the rate change alone. But this does not matter, since the current pricing scheme is also accompanied by exhortations to conserve. I note in passing that sharp increases, as in 1977 and 1988, are probably needed to bring about significant reductions in use, given the very small fraction of the typical user's budget devoted to water purchases at the old rates. (This is presumably why the more modest elevation

surcharges of 1983 have not had an impact, though the lack of an information program along the lines of those in 1977 and 1988 may also be a factor.)

Provision of the disputed American River water would undoubtedly also help alleviate shortages in the short term or the long term. This additional source can be looked on as a kind of insurance against rates going too high. Conversely, inter-district sales or rising block rates or both can be relied on to keep down the EBMUD demand for American River water in most years, allowing a greater flow to the Delta.

We come, finally, to the question of additional terminal storage. Once again, I believe securing the Delta aqueducts, and changes in water marketing and pricing, all as outlined above, will be sufficient to deal with EBMUD's objectives. In the event they are not, and additional storage is desired, Los Vaqueros seems preferable to Buckhorn for two reasons. First, the capacity of Los Vaqueros is flexible (before construction), ranging from 50,000 acre-feet to 1,000,000 acre-feet. With secure Delta aqueducts, diversion of some Camanche water, and perhaps also rising block rates, only some marginal addition to the capacity dedicated to the Contra Costa Water District should be needed. This is easily accommodated by Los Vaqueros. Second--and related--is the planned construction of Los Vaqueros by the Contra Costa Water District (and, perhaps, others). Assuming this happens, the environmental impact of reservoir construction would be greatly reduced by having only one site developed for this purpose rather than two.

Concluding Remarks

I mentioned at the outset that maintenance of water quality is also, and very properly, a concern of EBMUD. Notice that none of the alternatives I have put forward for achieving security and mitigating shortages involves any

diminution of water quality. Specifically, use of Delta water is not proposed. I understand that some feel this option would be preferable to those advocated here or in the Technical Report. Their argument, as I understand it, is that treatment plants for water from the local reservoirs (as opposed to the Orinda filter plant, which takes water directly from the aqueducts) are adequate for Delta water or could be made so at relatively modest cost. To the extent this is correct, we have an additional acceptable (safe, cheap) alternative, one that may be used in conjunction with the others discussed. This much would be true, at least, for the objective of mitigating temporary shortages. For the longer run, and for achieving security, inter-district water sales, rising block rates, and reconstruction of the Delta aqueducts would still be indicated.

In summary, then, I believe the Technical Report has done an excellent job of identifying problems in water supply management in the East Bay. It likewise does well in developing and reviewing a wide range of alternatives for dealing with these problems. The purpose of this set of comments is simply to suggest that some of the alternatives discussed in the Report merit more serious consideration than they are given in the Report's conclusions and recommendations and that one of the recommended alternatives deserves less.

Specifically, the water supply management problems are (1) to provide security against earthquake or flood damage to the Mokelumne Aqueducts in the Delta and (2) to mitigate shortages due to drought and, in the longer run, gradually increasing demand. The Report emphasizes construction of additional terminal storage capacity, in particular development of a reservoir having a capacity of 145,000 acre-feet in Buckhorn Canyon, as the lead element in a solution to both problems. By contrast, I believe better alternatives--cheaper

and less environmentally damaging--are (1) to provide security, reconstruction of the Mokelumne Aqueducts in the Delta in a phased program, beginning with replacement of the relatively vulnerable Aqueduct No. 1 and (2) to mitigate shortages, a combination of purchase of Camanche Reservoir water, primarily from the Woodbridge Irrigation District, which currently takes the largest single share of this very high quality water, sharply rising block rates accompanied by a conservation information program, and (if still needed) an addition to the capacity dedicated to the Contra Costa Water District at the planned Los Vaqueros Reservoir. These recommendations are qualified to the extent EBMUD's customers are willing to accept Delta water to mitigate a temporary shortage rather than (for example) face sharply higher rates.

June 14, 1988

To whom it may concern:

I am extremely concerned about the possibility of the Buckhorn Reservoir being built in Moraga!

1) I feel construction of such would pose a safety factor to residents, particularly school children on Camino Pablo Rd. An open trench and 7ft. pipe could be extremely hazardous to schoolchildren walking or riding bikes on that road!

2) Transportation could prove to be unreasonably difficult with such construction taking place for such an extended period of time — especially if we have no school busses next year. The number of cars maneuvering around the construc-

tion to drop off students will create a real bottleneck around the two schools on Camino Pablo Rd.

3) Weather factors are also to be considered! Moraga residents are not happy about cooler & foggy weather prospects if this reservoir becomes a reality.

I understand this reservoir would not sit on any active faults, but couldn't construction of this magnitude cause earth movement?!!

I feel consideration of this location is not fair to Moraga residents. This town is too small to accomodate this major disturbance! Wouldn't it be more reasonable to select one of the other two sites being considered which are non-residential & closer to those who will get to use the water?

Sincerely, Nancy B. Trickett

DEPARTMENT OF HEALTH SERVICES

4744 P STREET
 SACRAMENTO, CA 95814



June 15, 1988

Mr. David Fullerton
 Sierra Club
 San Francisco Bay Chapter
 2017 Berkeley Way, #7
 Berkeley, CA 94704

Dear Mr. Fullerton:

Dr. Harvey Collins has asked me to respond to your letter concerning the risk factors associated with trihalomethanes (THMs). In your letter, you described three cases which you had requested that we consider:

- Water system (1) provides water with a constant THM level of 30 micrograms per liter.
- Water system (2) provides water with a constant THM level of 80 micrograms/liter.
- Water system (3) varies between these levels where:
 - Normal THM levels for EBMUD are 30 micrograms/liter.
- When Delta water is introduced, the level is 80.
- Each use of Delta water lasts 6 months.

Your first question dealt with the absolute risk associated with THMs for systems (1) and (2). For discussion purposes, I will assume that the total THM concentration is in the form of chloroform and use the theoretical cancer risk due to chloroform to develop the risk numbers. In reality, there would be a combination of, at least, four THMs. Only chloroform is presently considered an animal carcinogen. Therefore, this is a conservative approach and may overstate the risk.

I will also use the theoretical cancer risk assessment published by EPA at the time the THM regulation was promulgated (Federal Register, Vol. 44, No. 231, Thursday, November 29, 1979). This risk assessment assumes one additional cancer case will occur in a million population at a concentration of 0.5 micrograms per liter of chloroform. This assumes a 2 liter per day exposure over a 70-year lifetime. A more recent risk assessment by EPA suggested that the cancer risk from chloroform is approximately 10-fold less.

For water system (1), absolute theoretical risk at 30 ug/l:
 6×10^{-5} or 6 excess cancer cases per 100,000 population.

For water system (2), absolute theoretical risk at 80 ug/l:
 16×10^{-5} or 16 excess cancer cases per 100,000 population.

11

Your second question concerned the relative theoretical risk between water system (2) vis a vis water system (1). A determination of relative theoretical risk is not possible without knowledge of the background cancer rate in the affected population.

Your third question concerned intermittent use of the Delta water (six-month use at various intervals) for water system (3) which normally has THM levels of 30 ug/l.

The absolute theoretical risks for the intervals you proposed are:

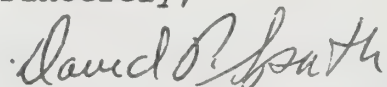
	<u>Time Interval, Years</u>			
	<u>5</u>	<u>10</u>	<u>20</u>	<u>50</u>
Absolute Theoretical Risk, Excess cancer cases per 100,000 population	7.0	6.5	6.25	6.1

From the standpoint of comparative risk, system (1) has a lower theoretical risk compared to system (3), while system (2) has a higher theoretical risk compared to system (3). As you may have surmised from the absolute theoretical risk levels, it is assumed that the risk is linear with exposure time.

I caution you again that these are conservative theoretical risk estimates that assume the THM levels are solely due to the presence of chloroform.

You can contact me at (415) 540-2154 if you have any additional questions.

Sincerely,



David P. Spath, Ph.D.
Senior Sanitary Engineer
Public Water Supply Branch

cc: Environmental Health Division:
H. F. Collins, Ph.D.
Public Water Supply Branch:
P. A. Rogers, Sacramento
R. E. McMillan, Berkeley
R. W. Hultquist, Berkeley

Table 25.--Dead and homeless due to dam failure- San Francisco study area

Dam	Maximum potential individuals exposed		Maximum Potential deaths		** Probable potential deaths	
	Day	Night	Day	Night	Day	Night
Lafayette	105,000	100,000	12,000	8,000	8,000	6,000
San Pablo, or Briones and San Pablo	54,000	56,000	32,000	33,000	22,000	28,000
Upper San Leandro	95,000	120,000	55,000	57,000	33,000	39,000
Lower Crystal Springs	67,000	63,000	33,000	34,000	22,000	28,000
Calaveras, James Turner, and Del Valle	138,000	150,000	33,000	37,000	22,000	26,000
only Calaveras	39,000	44,000	9,000	8,000	6,000	6,000
only Del Valley	23,000	26,000	17,000	21,000	11,000	14,000
Lexington	*	79,000	*	22,000	*	17,000
Anderson and Coyote	*	20,000	*	6,000	*	3,000

* Not available.

** "Probable" is defined as the more likely number on the basis of the probable exposed downstream population rather than the census count of all persons in the area.

From "Metropolitan San Francisco and Los Angeles Earthquake Loss Studies:
1980 Assessment. Steinbrugge et al. USG-5

Richard L. Kolm
Asst. Chief Engineer for Planning
EBMUD, P.O.Box 24055
Oakland, CA 94623

6.15.88

EBMUD Board of Directors
P.O. Box 24055
Oakland, CA 94623

Moraga Town Councilmembers
350 Rheem Blvd.
Moraga, CA 94556

EBMUD Water Supply Management Program Draft EIR and
Technical Report April 1988

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JUN 15 1988

Gentlemen,

OFFICE OF PLANNING

The following comments refer to specific pages and are presented in the order in which they appear in the indicated documents:

Draft Environmental Impact Report

5-21 It is my understanding that the site selected for the Buckhorn pumping plant is indeed the site of the condemned, abandoned, and buried sewage disposal plant which is located just below the LaSalle Lake Dam at St. Mary's College. If this is indeed the case shouldn't it be so stated? In addition, since the Town of Moraga considers LaSalle Lake part of a scenic corridor, shouldn't the councilmembers be informed and involved in assessing the impact of this choice?

5-38 This is a very interesting map. However, it raises more questions than it answers and may have several confusing and misleading errors.

The Moraga Fault divides and goes off to the left of the map. Does this fault more or less follow Camino Pablo in the region where the 84" aqueduct is planned? Shouldn't it's effect on the aqueduct be included in the EIR?

Where Brown Ranch Road crosses a low saddle at the 760' elevation the symbol for a possible saddle dike and the number 5 are shown. In the Symbol Legend the numbers in parentheses make no sense. These should be clarified.

For clarification of the situation at the Brown Ranch Road Saddle I have referred to BORCHERDT AND OTHERS-EARTHQUAKE INTENSITY SAN FRANCISCO BAY REGION MAP MF 709 available from the Dept. of the Interior, U.S. Geological Survey. Sheet 3 of this report shows the soil at the Brown Ranch Road Saddle to be Qal. It is not so

shown on page 5-38 of the EIR and I believe this to be a significant error. Qal is defined by Bochart and Others to be "Quaternary Alluvium: Unconsolidated to weakly consolidated silt, sand, and gravel..."

- 5-46 The second paragraph on this page states that none of the faults close to Buckhorn Dam are active. This does not correlate with my memory. To clarify this I contacted:

Director of Seismographic Stations
475 Earth Sciences Building
University of California
Berkeley, California 94720

In addition to showing an increase in earthquake activity in the vicinity of the proposed Buckhorn Canyon Reservoir, their computer listed 3 earthquakes as summarized in the following table:

Date	Time UTC	Latitude	Longitude	Richter Magnitude
27 Mar 84	033635.4	37.75°	122.09°	4.3
27 Mar 84	034839.5	37.75°	122.09°	2.5
04 Sep 85	060046.7	37.75°	122.09°	3.1

Of significance is the location of these three earthquakes. Latitude 37.75° north and longitude 122.09° west is within one kilometer of San Leandro Reservoir and the Miller Creek Fault. The no reported activity statement is incorrect and suggests that this section of the EIR should have additional study.

- 5-59 I like the statement about 3 days emergency supplies for project personnel, but what about the thousands of residents that live within 1.5 miles of Buckhorn Reservoir?

- 5.60 Ninety percent of the potential landslides shown on page 5-38 are within or below the proposed Buckhorn Reservoir. How does one drain a landslide that is within or in proximity and below a reservoir? Don't these problems indicate early silting up and potential disaster for the proposed Buckhorn Reservoir? Should they not be addressed in the EIR?

21

21

20

5-136 Section 5.9 of the EIR refers to archeological sites and on this page it is stated that they are in "close physical proximity to one another." Photographs of an Indian grinding rock and a petroglyph said to be near the proposed Buckhorn Dam site have appeared in the Contra Costa Sun newspaper. Additional photographs may be seen at the office of the Moraga Historical Society in the Moraga Library. Other archaeological sites including a stone foundation and an Indian grinding rock are known to exist near the 640' elevation in Kaiser Creek. The distance between the archaeological site at the dam and the site at 640' elevation is approximately 3 miles. It is not at all clear from the EIR that the artifacts at the proposed dam site or those 3 miles upstream are being discussed. This should be clarified in the EIR.

For additional information on archaeological sites the book MORAGA'S PRIDE is recommended. It may be obtained from: Moraga Historical Society, P.O. Box 103, Moraga, CA 94556.

On page 11 of Moraga's Pride a photograph may be found of the Indian grinding rock located near the proposed dam site. The EIR should indicate what would happen to this archaeological site depending on which of the 4 dam axis locations shown on page 5-38 is chosen.

Page 13 of Moraga's Pride tells of Indian burial sites near LaSalle Lake that have yielded two dozen skeletons and numerous findings of Indian relics throughout the Moraga area. Pages 14 and 15 detail the location of 16 findings. (Site 7 is in error on page 14. It is shown on the King Canyon arm of USLR. It is correctly described on the Kaiser Creek arm on page 15.)

From what is described in the first 16 pages of Moraga's Pride one gets the impression that the EIR discussion of archaeological resources in the vicinity of Buckhorn is inadequate. At the very least, the EIR should attempt to correctly locate these resources and consider the consequences of additional archaeological discoveries during construction. The effect of the various alternatives must also be considered.

5-153 The effect of dam overtopping by a wave
 5-154 produced by a landslide, perhaps earthquake-
 induced is adequately described. But what
 about overtopping the Brown Ranch Road Saddle?
 If the elevation of the Brown Ranch Road
 Saddle is 760' and the Buckhorn Reservoir is
 filled to an elevation of 745' isn't this
 indeed a likely scenario? Since the material
 of the Brown Ranch Road Saddle is not up to
 dam standards (BORCHERDT AND OTHERS Sheet 3),
 isn't it likely that failure of the Brown
 Ranch Road Saddle caused by wave overtopping
 or even a landslide on the downstream side
 would reach peak outflow even faster than
 indicated for dam failure on page 5-154?

20

Some of the flow would likely divert to the
 left and out King Canyon to USL Reservoir, but
 with a rapid failure is it not likely that
 some flow would continue over the 560' ele-
 vation saddle of Camino Pablo and into the
 residential section of Moraga?

Additional study of the Brown Ranch Road
 Saddle is needed. Review of the Video Tape
 prepared by Rogers-Pacific for the Town of
 Moraga is recommended. Review of BORCHERDT
 AND OTHERS Sheet 2 is also recommended. It
 shows predicted earthquake intensity of C =
 Very Strong at the Brown Ranch Road Saddle
 and most of the Moraga aqueduct region. What
 is shown on this map of Delta aqueducts is E =
 Weak.

Water Supply Management Program

II-14 Where is the Green Valley fault? Could it be
 that the Greeville fault is intended? It is
 my understanding that the Greeville fault is
 an excellent example of an "inactive fault"
 where stresses built up to the point where
 several significant earthquakes were produced
 in recent times. This characteristic of
 "inactive faults" should also warrant inclusion
 of the Moraga Fault in the EIR Analyses.

21

The chart on page II-14 is excellent. For
 proper evaluation of the alternatives in the
 EIR it is recommended that additional columns
 be added showing Peak Ground Accelerations at
 locations of proposed terminal resevoirs and
 aqueducts.

V-23 There appears to be very little head loss with

105 MGD flow thru a 66" pipe from the Moraga pumping plant to the Buckhorn pumping plant. If this is an error, would it not result in an understatement of the pumping costs for Operation of the Buckhorn Reservoir?

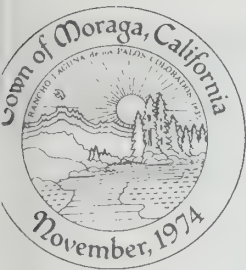
The Operational Grade Lines for Los Vaqueros appear to be based on greater flow rates in a smaller pipe than used for the Buckhorn Project. Why is this? Would it not result in overstatement for operation of the Los Vaqueros reservoir?

- B-1 For a more meaningful evaluation of project costs shouldn't more detail of property costs as well as the value of the submerged land be shown for each of the three alternatives?

Thank you for your consideration.

Tom Buckingham

TOM BUCKINGHAM
Concerned Moraga Resident
131 Tharp Drive
Moraga, CA 94556



Town of Moraga

350 RHEEM BOULEVARD, SUITE 2
P.O. BOX 188
MORAGA, CA 94556
(415) 376-5200

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JUN 15 1988

CHIEF ENGINEER

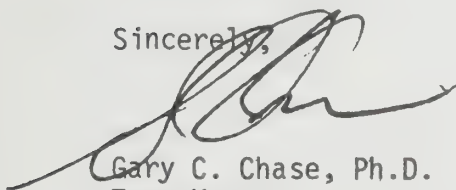
June 14, 1988

C. T. Way
East Bay Municipal Utility District
2130 Adeline Street
P.O. Box 24055
Oakland, CA 94623

Dear C. T. Way:

The Town Council of the Town of Moraga conducted a Public Hearing on the East Bay Municipal Utility District Draft EIR concerning the Water Supply Management Program. Transmitted to you by way of this memo is all correspondence and public testimony received at this meeting. The Moraga Council requests that this material be included in the responses to the Draft EIR and be commented upon by the EIR consultants.

Sincerely,



Gary C. Chase, Ph.D.
Town Manager

GCC:dmc

Enclosures

*Attachments
hand delivered
6/16/88*



Town of Moraga

350 RHEEM BOULEVARD, SUITE 2
P.O. BOX 188
MORAGA, CA 94556
(415) 376-5200

RECEIVED

JUN 16 1988

CHIEF ENGINEER

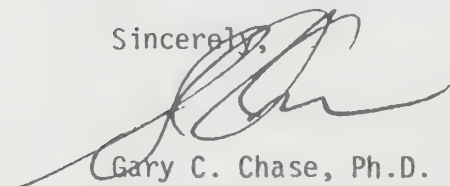
June 14, 1988

C. T. Way
East Bay Municipal Utility District
2130 Adeline Street
P.O. Box 24055
Oakland, CA 94623

Dear C. T. Way:

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Sincerely,



Gary C. Chase, Ph.D.
Town Manager

GCC:dmc

Enclosures

TOWN OF MORAGA
TOWN COUNCIL - JUNE 8, 1988

I. CALL TO ORDER
PLEDGE OF ALLEGIANCE
ROLL CALL
ANNOUNCEMENTS

The meeting was called to order by Mayor Kendall at 7:30 p.m. in the Joaquin Moraga Intermediate School Auditorium, 1010 Camino Pablo, Moraga, California. Following the Pledge of Allegiance, the Mayor noted that all members of the Council were present with the exception of Councilmember Connors.

Mayor Kendall introduced newly-elected councilmembers Graig Crossley, Richard Avanzino and Jim Sweeny. She then announced that the Town is seeking applicants for the Planning Commission and Town Treasurer. Those who are interested in being considered for either of those positions should submit a letter to the Town Office.

II. SPECIAL ORDERS

A. Public Hearing to Consider East Bay MUD Water Supply Management Program EIR

Mayor Kendall reported that the purpose of this hearing is to listen to the comments of the public and a Planning Commission/Design Review Board/Environmental Review Committee subcommittee regarding the draft EIR. At the conclusion of this hearing a summary of those comments will be forwarded to East Bay MUD for consideration at their meeting of June 17. She opened the public hearing at 7:40 p.m.

Rich Kolm, Assistant Chief Engineer for Planning at East Bay MUD, addressed the Council on behalf of that agency. He explained that the technical report and draft EIR were prepared by the staff of East Bay MUD with the help of its consultants. He added that the EIR is an environmental analysis of the proposals contained in the technical report, and a summary of the two larger reports is also available. Mr. Kolm explained that the reports define the District's water supply problems, the alternatives that Staff has considered, and the proposed solutions. The problems include the security of the District's water supply, the shortage of water during drought periods, and the safety and health of the water supply. He stated that the objectives of the proposed water supply management program are to provide security against an outage of the Mokelumne River supply caused by flood or major earthquake damage to the aqueduct pipelines in the Delta. Mr. Kolm explained that the security is needed not only for the existing customers of the District today but for the new customers who will come on line over the next decades. He stated that with a 39 percent reduction, similar to the one in 1977, the District can get through a drought period today. However, as new growth occurs within the District's boundaries in cities and counties authorized for development, there will be a need for new storage to carry the District through drought periods and keep rationing at a reasonable level. He stated that the third objective of the program is to maintain the high quality of the District's water supply.

Mr. Kolm explained that the written comments on the draft EIR are due by June

17, after which the District will respond to all of the written comments and verbal testimony. A final EIR and technical report will then be prepared and submitted, along with the program recommendations, to the District's board of directors either in the late summer or early fall.

Mr. Kolm stated that the proposed water management program includes additional conservation measures, water reclamation projects, levee and pipeline improvements in the Delta, water treatment improvements at the six water treatment plants, water banking, and watershed enhancement. He explained that water banking is the construction of terminal storage facilities and is a key factor in maintaining security in the event of an earthquake or drought. He stated that East Bay MUD is aware that water banking is an issue of particular interest in Moraga because it could involve the construction of a reservoir at the Buckhorn site between Moraga and Castro Valley. He stated that the decision to construct another reservoir, which has not yet been made by the District, will probably involve two steps. The Board will first determine whether or not additional storage is needed and, if so, how large it must be and where it should be built. He explained that the District staff has been considering three sites - Pinole, Buckhorn, and participating in Los Vaqueros with the Contra Costa Water District. If the Board determines that additional storage is needed, they will have to decide which of those sites is the best for that storage.

Mr. Chase reported that a number of letters have been received regarding this matter over the past few weeks. Copies of those letters have been provided to the Council and will be included in the record and forwarded to East Bay MUD along with the Town's submittal. He further explained that the Planning Commission, Design Review Board and Environmental Review Committee have jointly reviewed the EIR and submitted their comments to the Council in a memorandum dated June 3, 1988. They addressed only what they considered to be inadequacies and deficiencies in the report and not the merits of the proposal. Mr. Chase outlined the various points in the memorandum as follows:

1. The impact on the Delta and regional water quality of taking water from the rivers for storage.
2. Possible climatic changes due to evaporation in the immediate vicinity of the reservoir.
3. Possible inducement of earthquakes when the reservoir is filled.
4. Design of the pumping station, including noise, alternative locations, scenic corridor, etc.
5. Security during construction of the pipeline, particularly on the weekends and during and after school hours when much activity still exists on the school campuses.
6. Safety precautions when laying the pipeline, size of excavation, traffic rerouting, traffic safety, etc.
7. Emergency access around road construction sites.
8. Alternate routes for pipeline.

9. Impact of the pipeline on scenic roads, particularly St. Mary's Road where it is narrow and driveways come out on it. Is there a possibility of using an alternate route off the street such as the trail? (16)

10. The timing of construction in relation to the construction on the interchange of Highway 24 and 680. (19)

11. The construction workers may not all come from the Castro Valley Area. What routes would North Bay construction workers use to get to the staging areas? (19)

12. Can the reservoir construction be seen from any area of Moraga? (19)

13. Wildlife, particularly eagles and falcons, and how noise from construction dynamiting may affect their nesting and choice of habitat. (23)

They also made the following additional comments for the record:

1. The Buckhorn Reservoir should never be open for recreational uses. (26)

2. If the Buckhorn Reservoir is proposed, soils reports and seismic studies should be made available to Moraga for review. (19)

3. What are the advantages and disadvantages of not having a pipeline along Camino Pablo, Canyon Road and Moraga Road, St. Mary's Road and a pumping station at Rheem Boulevard and St. Mary's Road, and instead pumping water directly into Buckhorn Reservoir from the Upper San Leandro Reservoir. (16)

Mr. Chase explained that the memorandum also includes some recommended mitigations.

Councilmember Connors arrived at 7:50 p.m.

Mr. Kolm stated that East Bay MUD has had an opportunity to study the comments made by the Planning Commission, Design Review Board and Environmental Review Committee. All of those comments, as well as any made tonight, will be included and addressed in the final EIR. He pointed out that the purpose of this process is to insure that all issues have been considered before a final recommendation is made to the East Bay MUD Board of Directors. He briefly addressed some of the above questions and concerns.

Mr. Kolm explained that the initial filling of the reservoir would come off of the Mokolumne River's entitlement. The District can currently take 325 million gallons per day and is only using an average of about 220 million gallons. He stated that there is sufficient water from that source to fill the reservoir, but it would take some time to fill it.

With regard to the question regarding evaporation of water in the summer, he stated that there would be about 2500 acre feet of evaporation per year which is a relatively small amount of water. The EIR consultant has indicated that there will be some change in climate as a result of that evaporation in the atmosphere near the reservoir which could cool the air by 1 or 2 degrees on a hot day. On a cold night or day, the ambient temperature would be increased by 1 or 2 degrees. The consultant has also indicated that there would be no additional generation of fog.

Mr. Kolm further reported that the possible inducement of earthquakes is a concern when there is an active earthquake fault running through the site. In this particular case, there are earthquake faults in the vicinity of the reservoir, but none is considered by the geotechnical experts to be active.

With regard to the pumping station, Mr. Kolm stated that it would be similar to others built by the District. He explained that one of their more recent structures is located in the west end of the Sycamore Valley and cannot be easily seen because it is below ground. This was done in close cooperation with the City of Danville which planned to build a park nearby. He stated that the noise level from their other pumping stations has been found to be less than the ambient noise level in the vicinity of the structure.

Mr. Kolm further explained that the construction of the necessary pipelines along St. Mary's Road, Moraga Road, Canyon Road, and Camino Pablo would be similar to the pipelines they built in 1985 and 1986 in Walnut Creek, Alamo and Danville. He stated that East Bay MUD cooperated with those cities and the school districts in coordinating the timing and minimizing the adverse impacts of the pipeline construction. He stated that the 10 month period of construction is the total time to complete the pipeline. He pointed out that they would be doing the work one section at a time and then moving on to the next area. Therefore, disruption will only be to a very localized area for a short period of time. He stated that the District has laid over 22 miles of this type of large pipeline in the San Ramon Valley over the last few years so has gained considerable experience in trying to minimize the problems and impact on the local communities.

He stated that there is no proposal to provide any water-oriented recreation on Buckhorn Reservoir. East Bay MUD is only considering enhancing the trail system through that open space area. Staff would propose that any water-oriented recreation take place on Upper San Leandro Reservoir which is accessible from Castro Valley.

Mr. Kolm stated that another concern is the destruction of habitat and the need to buy open space. He pointed out that, according to the District Staff proposal, an additional 4800 acres of land that are associated both with the Buckhorn site and the Upper San Leandro Reservoir, as well as with the District's watershed properties further north in Pinole and Briones Reservoir Areas, would be purchased for additional open space and expanding the existing trail systems. He explained that the District currently owns 25,000 acres in the watersheds around the five current reservoirs, and the East Bay Regional Park District and other agencies own 20,000 acres adjacent to the watersheds.

Mayor Kendall invited members of the audience to speak regarding the adequacy of the EIR. She reminded them that this hearing is not for the purpose of discussing the merits of the project.

Steven Thaw, 30 Woodside Drive, Moraga, stated that he attended the East Bay MUD hearing at Kaiser Center and heard a geophysicist testify that the ground where the reservoir was to be placed is not safe for that purpose. If there were any breakage, the water would go down through the ground and onto Sanders Ranch. That individual also testified that the EIR indicates there was no critical habitat for endangered animals, but there have been some animal homes and tracks spotted there.

Bettie Graves, 53 Rick Court, Moraga, spoke on behalf of the Moraga School Board which is concerned about the possible building of Buckhorn Reservoir. Many of their concerns are related to the construction phase of the project which would have a definite impact on the quality of education. Those concerns include:

1. Noise. She pointed out that noise carries throughout the valley and Camino Pablo School is closest to the construction site. She thinks it is conceivable that a child in that school could have four of its six years in elementary school in a chaotic, noisy environment. She does not think that is good for a developing child. She stated that the Joaquin Moraga Intermediate School would also be affected but to a lesser degree. Noise and traffic also impact the rural teenager. (16)
2. Traffic. She stated that the School Board was relieved to see in the EIR that all truck traffic would not be coming up Camino Pablo. However, they noted that a large number of trucks and automobiles of the work crews would be using that heavily-traveled corridor. To compound the problem, the Moraga School Board faces a possible removal of their bus program because of a recent court ruling. That would mean increased traffic from parents dropping off and picking up their children as well as an increase in bikers and pedestrians on Camino Pablo. While the EIR correctly states that the schools use this facility from 7:30 a.m. to 3:00 p.m., both school sites are used for after school sports each afternoon all year long. In addition to that, there is a before school and after school day care program at Camino Pablo beginning at 6:00 a.m. and ending at 6:00 p.m. (16)
3. Climate Changes. She pointed out that many children in this area are asthmatics and/or have problems with pollen and allergies. The School Board is concerned that the heavy concentration of dust from the construction site could severely impact those children. (19)
4. Chances of an Accident. The Board is concerned about the possibility of a break in the pipeline or spill which could endanger the 1000 children who attend the two schools on Camino Pablo. Mrs. Graves asked if the District would have time to get those children safely out of the area in case of an emergency. She pointed out that the EIR incorrectly indicates that Camino Pablo is a four-lane road. She stated that Camino Pablo is a two-lane road with parking on both sides. The Board is also concerned that a 10 to 20 foot wide trench along that road would be hazardous to children walking to and from school. Another concern is the ability of emergency vehicles to reach the school sites during the construction of the pipeline. (16)

Elliott Abers, 154 Selborne Way, Moraga, expressed concern about the safety of Buckhorn Reservoir. He stated that the endangered species list in the EIR is incomplete because Moragans are not included. He referred to the layout of Buckhorn as shown on Page 538 of the EIR. He stated that an aqueduct 7 feet in diameter, the size of a one-car garage door, would be laid from St. Mary's College along St. Mary's Road, Moraga Road, Canyon Road and Camino Pablo and then through a 5900 foot tunnel to the reservoir. That construction would go through the busiest section of Moraga, past three schools, the library, a retirement home and other important organizations and businesses. He showed the location of two "inactive" earthquake faults in relationship to the proposed reservoir. He further referred to the reference to slides on Page 549 of the EIR which states: "Such human activities as impounding water can reduce the

natural sheer strength of bedrock slopes and generate sliding, even in areas of normally low susceptibility." He then referred to Page 50 of the EIR which says, "Erosion hazards at Buckhorn vary between moderate and very high." Mr. Abers pointed out the potential slide areas, as identified by East Bay MUD and their consultants, which were outlined in red on the exhibit. He referred to the slides on Rheem Boulevard and Highway 24 which are indications that slides do occur in this area and pointed out that water accelerates slides. He stated that when a slide occurs in a dam, a wave action occurs which varies according to the size of the slide. If there is a slide when the water level is high, he thinks the water will overflow and go down Camino Pablo Road. He stated that a dam saddle is shown on the diagram but is not mentioned in the EIR. (20)

Mr. Abers addressed the construction of the pipeline. He referred to the disruption on Camino Pablo last year while the Central Sanitary District installed its pipeline to Sanders Ranch. He stated that respiratory problems were caused by the dust and dirt from that project. He questioned whether a pipeline as large as the one being proposed by East Bay MUD can be installed within ten months. He stated that it took a very long time to lay a much smaller pipe from Hodges Drive to Sanders Ranch on Camino Pablo. He thinks it could take at least 20 months for this project to be completed. He pointed out that there could be considerable rain during that period as well. He stated that at a meeting he attended last week on this subject, an engineer for East Bay MUD indicated that the earthquake faults near Buckhorn are inactive and that even if earthquakes do occur they tend not to break or crack steel aqueducts. Mr. Abers expressed concern about the use of the word "tend" in that case. He then referred to Page 5-3 of the EIR which states, "Other alignments cross up to four geologic units and a fault zone." Mr. Abers thinks there must be two kinds of faults; one for Buckhorn and one against Buckhorn. He referred to Page 559 which outlines procedures to follow for earthquake preparedness. They include providing for food, water and shelter for project personnel for three days. (16)

Mr. Abers referred to information gathered by Tom Buckingham of Moraga which was not included in the EIR. The data is from the University of California and indicates that from January 1967 to January 1977 there were six earthquakes in the Lamorinda Area of 2.5 to 3.5 intensity. He pointed out that San Pablo, Briones, Lafayette and Upper San Leandro reservoirs are already in this area and Buckhorn is supposed to hold as much water as all of the others put together. It would be very deep, and that is why he and others are concerned about the weight of the water inducing earthquakes. He stated that in 1977 East Bay MUD rebuilt the dam at Upper San Leandro Reservoir. From January 1977 to January 1987, there were 21 earthquake events in Lamorinda. Three of those events occurred at the base of the San Leandro dam with an intensity of as high as 4.5. Therefore, he questioned the statement that the faults are inactive. He also pointed out that the University of California has one of its recording stations at the dam on San Pablo Dam Road. He thinks that is an indication that they are concerned about dams and earthquakes. (21)

Mr. Abers thinks the EIR was prepared with only one objective, and that was to build Buckhorn. He offered to present this information in written form as part of Moraga's official position if that is the Council's desire. (19)

Mayor Kendall pointed out that the minutes of this meeting, along with any written comments received during the official comment period, will be transmitted to East Bay MUD for inclusion in the final EIR.

Councilmember Connors pointed out that all written comments must be in by June 17. He encouraged members of the public to submit written comments because they must be responded to in the response section of the EIR.

Mayor Kendall pointed out that the comments made at this meeting tonight are part of the public record and must also be responded to in the final EIR. She suggested that any written comments be forwarded directly to East Bay MUD to insure that they are received before the deadline.

Carl Shanahorn, 22 Lynch Court, Moraga, stated that he attended the East Bay MUD meeting and has read both the EIR and technical report. He reminded people that the summary is just a summary and does not tell what will really happen. He presented a five-page letter which outlines his concerns, many of which have already been addressed by Mr. Abers. He suggested that the Council review Section 5.4.3 of the EIR in its entirety, because it outlines in great detail what can happen because of slope instability. As pointed out by Mr. Abers, consideration has been given to the safety of workers in case of seismic activity during construction. However, there is no consideration for local residents after construction. He does not understand why preparations must be made for earthquakes during construction but not for after construction. He stated that he finds it hard to believe that the reservoir would not increase fog and condensation problems.

He stated that the EIR mentions a conservation program, but without reading the local newspapers, he thinks it would be difficult to see any conservation efforts by East Bay MUD. Outside of a rate statement included with a recent bill, very little has been mailed to local residents requesting conservation. Mr. Shanahorn pointed out that East Bay MUD has indicated they need additional water to service the cities within their boundaries. However, East Bay MUD's boundaries continue to expand upon direction of LAFCO without the requirement to expand their facilities.

Mr. Shanahorn stated that he is concerned about possible ruptures of the pipeline. He pointed out that a slide which occurred near the Mormon Temple in Oakland a number of years ago ruptured a Shell Oil pipeline and caused considerable devastation.

If East Bay MUD decides to go ahead with constructing Buckhorn Reservoir, Mr. Shanahorn would like them to consider some alternatives for location of the pipeline. He would prefer that they bring the water in over Bollinger Canyon, even though that may be more expensive in the long run. He thinks that is especially appropriate because of the proximity to the areas East Bay MUD hopes to serve. He stated that he works for a large engineering and construction company which has done projects like this all over the world. He knows it is possible to run a pipeline over mountainous terrain.

Mr. Shanahorn expressed concern about the quality of repaving which is generally done by utility companies after they have torn up roads. He stated that once the roads begin to settle in two or three years, it is the Town's responsibility to repair them.

He referred to Section 5.6 of the EIR which does not address the impacts on the Moraga Royale senior citizen housing development. He stated that, in the same section, noise levels 1000 feet from the dam are projected to be 70 db. Based upon his experience in pipeline construction, he thinks the noise levels will

be much higher than that, particularly closer to the pipeline. He pointed out that the EIR recommends the work be done during off-commute and off-school hours. He is concerned about the noise impacts of that work being done at night. 16

Mr. Shanahorn then referred to the mitigations recommended in Section 8.3. He stated that hauling vehicles are generally operated by individual contractors who do not adhere to speed and load limits. He stated that they will have to carry out great quantities of dirt and bring in loads of rock for this project. He questioned whether the construction vehicles would be covered by tarpaulin to control dust as recommended in the EIR. He stated that he has never seen a tarpaulin on a construction vehicle. 16

Mr. Shanahorn agreed with Mr. Abers that the construction period will probably take longer than ten months. He expressed concern about possible flooding from the pipeline in case of earthquake damage, a future change in policy regarding recreational use of the reservoir, and the high construction costs which will be passed on to ratepayers. He thinks Lamorinda residents will receive little or no water from this source. He believes the people who will benefit from Buckhorn are the residents of the San Ramon Valley because this site would allow East Bay MUD to provide water to them without the use of pumps. 16 21 16

Rose Schneller, 1520 St. Mary's Road, Moraga, stated that she had a landslide on her property in 1970. It took three months for the construction crews to repair the damage on her property. She also had to grant an easement for pipes along one side of her property and under her driveway to carry water from another residential project to the creek along St. Mary's Road. She asked how this pipeline can be built across St. Mary's Road when there are already numerous utility lines there. She stated that she would also lose part of her driveway because of this project. 16

Aida Peterson, 603 Rheem Boulevard, Moraga, stated that when the development across the road from her home was built, large earth movers were there for three long months from dawn to dusk. She and her neighbors have suffered property damage as the result of that development and had to put in new drainage pipes and retaining walls at their own cost. 16

Greg Johnson, 1224 Rimer Drive, Moraga, expressed concern about the very short 45-day response time for the EIR on this very complicated issue. He agreed with the concerns which have been expressed by previous speakers. He does not think the EIR adequately addresses the development inducing effects of this reservoir. He referred to Page 2-17 of the EIR which states, "This reservoir would remove an obstacle to growth." Mr. Johnson thinks expanded development is one of the hidden agendas in this project as evidenced by the proposed size of the Buckhorn Reservoir and the fact that the East Bay MUD Board of Directors recently voted to expand its boundaries to include the Shadow Creek Development in San Ramon. That development has 425 homes with an average consumption of 750 gallons per day. While earthquakes have been discussed earlier, he pointed out that East Bay MUD gives as one of its primary justifications for the reservoir the protection of the water supply against possible earthquake damage to the aqueducts in the Delta. However, he thinks the evidence shows that there is more potential for earthquake damage at the Buckhorn site than in the Delta region. He stated that construction of the other two alternatives, Pinole or Los Vaqueros, would not take place near retirement homes, shopping centers, churches, and schools. He does not think the EIR adequately addresses the 1 24 21 29

impact of the inconveniences this construction project would create for the residents of Moraga. He thinks potential liability costs are also not adequately addressed. He pointed out that thousands of vehicles, pedestrians and cyclists would be passing by the construction sites each day creating considerable risk. (portions of testimony inaudible)

15

Comments made by the following individuals were inaudible:

Barbara Simpson, 288 Fernwood Drive, Moraga (expressing concerns about impact of pipeline construction on access roads)

16

David Fullerton (name not on attendance register) (expressing concern about growth inducing aspects of reservoir, lack of consideration of alternatives such as water conservation, the basis of numbers used in the document, and asking for a new EIR)

24

10

A resident of Corliss Drive, Moraga (expressing concern about the necessity for the reservoir, the numerous adverse impacts on the community, and the EIR's assumption that impacts are minor and can be easily mitigated)

6

27

Ed Bisiar, 1063 Camino Pablo, Moraga (expressing concern about blockage of access to residences along pipeline route and the necessity for additional access to Moraga)

16

Pamela Meeds, 11 Williams Drive, Moraga (asking what benefits the reservoir would have for Moraga)

26

Kathryn Carr, 1207 Camino Pablo, Moraga (expressing concern about impacts of pipeline construction on property values along route)

16

Jeff Harris, 127 Hodges Drive, Moraga (expressing concern about cost and rate increases and inadequate consideration of conservation measures)

10

Jim Sweeny, 296 Birchwood, Moraga (questioning where water would go if there are cracks or breaks in dam and what areas would be serviced by water from Buckhorn.)

21

J. Clayton (name not on attendance register) (addressing need to consider water shortage and solving that problem)

Theresa Bernie, 1581 Del Monte Ct., Moraga

Tom Buckingham, 131 Tharp, Moraga (expressing concerns about adequacy of EIR in addressing earthquake faults, landslide problems, and other impacts)

21

20

Carl McKirgan, 181 Shuey Dr., Moraga

Ruth Paglieran, 1230 Rimer Drive, Moraga

Bill Rees, 102 David Drive, Moraga (expressing concern about impacts of pumping station)

17

Ken Langan, 9 Thune Drive, Moraga (expressing concern about impacts of reservoir on Buckhorn Canyon and community and the attempts to push the project through during a drought year)

19

16

Bob Mitchell, (name not on attendance record) (concern about impacts on St. Mary's College)

(Tape audible once again)

John DiPietro, 170 Shuey Drive, Moraga, asked what the Council's position is on this matter which he thinks will have a profound effect on the quality of life in Moraga.

Mayor Kendall explained that the Council will make their opinions known after hearing all of the public testimony.

Joyce Jordan, 5 Pimentel Ct., Moraga, asked if Moragans will have an opportunity to testify on the merits of the project before the final decision is made.

Mayor Kendall replied that East Bay MUD will be holding public hearings on the project itself after the EIR hearings have been concluded. The public would have an opportunity to address the project at that time. She added that she is sure East Bay MUD would be happy to receive written comments from individuals at any time.

Al Clark, 431 Tharp, Moraga, stated that he understands the dam is outside of Moraga but that the pumping station is within the Town's limits. He asked if the Town has any control over that facility or if East Bay MUD has eminent domain.

Mr. Chase explained that Moraga has jurisdiction rights within its own city. However, East Bay MUD is a larger agency which has greater power than the cities. They can exercise eminent domain if they choose to do so.

W. F. DeJarnett, 119 Fairfield Place, Moraga, asked Mr. Kolm to respond to some of the questions which have been raised.

Terry Shea, 1179 Larch Avenue, Moraga, stated that he does not understand how this project has gone as far as it has with this shallow document. He urged the Council to unanimously reject it.

Rich Kolm, of East Bay MUD, responded to the above concerns. He explained that East Bay MUD is in the middle of the public review process at this time. The purpose is to listen to the concerns and input from the public in formulating solutions to what the District defines as their water supply problem. He stated that there has not been a decision made to go ahead with this project.

There was no one else wishing to speak regarding this matter. Mayor Kendall closed the public hearing at 9:27 p.m. and declared a recess. The meeting was reconvened at 9:38 p.m., at which time the Council discussed the item.

Councilmember DePriester referred to Page 5-3 and asked from where and how much of the 295 foot high tower will be visible. She stated that the next paragraph states that five tunnel alignments were evaluated in the geologic study in June 1987. She does not see those five alignments described in the EIR and thinks they should be addressed.

She then referred to Page 5-4 which indicates that an additional 1.5 acres of

land, presently owned by St. Mary's College, would be needed for the pumping station. She asked if there is a specific 1.5 acres being considered. She pointed out that the property is near Lake LaSalle which is addressed in the Moraga General Plan. She recommended that the consultant refer to the Moraga General Plan for more information on that subject. (17)

Councilmember DePriester then referred to Page 5-21 which indicates that construction of the Buckhorn dam and related facilities would have some land use impacts. She disagreed with that statement and recommended that it be changed to indicate that the construction would have extensive land use impacts. She stated that Page 5-23 should indicate that residences along and near Camino Pablo will be severely impacted by this project. She thinks Rancho Laguna Park should also be addressed. (16)

She referred to Page 5-53 which addresses operational effects. She thinks the first two paragraphs, related to slides caused by the accidental spillage of water and to the risk of erosion caused by the breakage of a pipeline or search tank, are inadequate. She recommended that a copy of the Rogers geologic presentation, which was made to the Planning Commission, be reviewed by the EIR consultant or that the consultant discuss this matter with Mr. Rogers. (20)

Councilmember DePriester referred to the mitigation measures on Page 5-58 and asked who would identify the unstable soils and potential landslide areas mentioned in the middle paragraph. She also asked if the Town Engineer would be involved in this process.

She then referred to the last paragraph on Page 5-73 which indicates that there is little use by wildlife in this area and a few riparian habitats are found along the alignment. She thinks that should be explored in more detail. She referred to the last sentence in the first paragraph on Page 5-87 which indicates that the riparian habitat loss is judged to be significant. She thinks that is an understatement and would like to have it developed more fully. She pointed out that Page 5-94 discusses a replacement of equivalent habitat values. She asked where that 34 acres would be located. (23)

Mr. Kolm explained that Indian Valley is being considered for relocation of the habitat.

Councilmember DePriester then referred to Page 5-107 and stated that houses which back up to Camino Pablo, as well as those on streets which connect with Camino Pablo, should also be included. She thinks the statement later in the paragraph, that there is a potential for truck trips per day to create a potentially significant impact, is grossly understated. She thinks the statement on Page 5-111 that the construction impact could be significant is another gross understatement. She thinks the impact will be significant. She stated that the third sentence from the bottom should be changed to read, "The project contractor should be responsible for clearing any and all damage..." She stated that she lives in the Camino Pablo Area and experienced the problems from the last project on that road. She pointed out that the Town went through a very long fight to get the road repaved properly, and she does not want to have to go through that again. (19)

Councilmember DePriester stated that she thinks alternate locations for the pipeline should be addressed in the EIR. She thinks the feasibility and desirability of not using city streets should be explored. She does not think the (16)

mitigation measures in the EIR are adequate and she thinks that section should be redone. She stated that she had previously expressed concern about the expansion of the current East Bay MUD district to new areas when they have difficulty servicing those who are already in the district. She stated that when she was on the Planning Commission one of the first questions asked when new projects were proposed was, "Are utilities available?" She thinks the answer to that question should be "no" until and unless new areas are annexed. (2)

Vice Mayor Dessayer stated that he has also questioned East Bay MUD about the need for continual expansion of their service area. He stated that he is particularly concerned about the adequacy of the EIR in addressing the impacts of the pipeline construction on the Town of Moraga. He stated that it also does not address the alternative of pumping water from the Upper San Leandro Reservoir to the Buckhorn Reservoir. If Buckhorn is to be built, he thinks that would be a better solution because there would be no necessity for any construction in Moraga. That would alleviate most of the concerns which have been expressed. He agreed with the statements made by many of the members of the audience regarding the inadequacy of the EIR in addressing numerous safety issues. (16)

Vice Mayor Dessayer referred to Page 5-32 and stated that he does not think the quality of water is adequately addressed in the discussion of Los Vaqueros Reservoir. He pointed out that there would be a mixture of water at that reservoir, and he thinks the quality of any water mixtures should be addressed along with their impact on the present quality of the water supply. (32)

Vice Mayor Dessayer also reinforced comments made by others regarding the impacts of the proposed project on the quality of life in Moraga. He does not think the EIR adequately addresses all of those concerns. (16)

Councilmember Connors stated that he is Chairman of the Lamorinda Buckhorn Defense League, Co-Chairman of the Citizens for a Better Contra Costa County and on the Infrastructure Committee of the Contra Costa County Planning Congress. He stated that many of his concerns have already been addressed. He agreed with the statement on Page 2-17 of the EIR that the types of developments which occur in the county are out of East Bay MUD's hands. He stated that future development will be determined by the new County General Plan which is currently being developed by the Planning Congress. The new General Plan proposes significant growth in the San Ramon Valley, with several large developments of over 50,000 people each. He stated that those developments will need water. He expressed concern about the ever-increasing numbers of trucks and costs which have been cited by East Bay MUD for this project over the past few months. He pointed out that St. Mary's Road is a scenic corridor with the entrance to St. Mary's College and the Town Library off of it. He thinks the library hours, as quoted in the EIR could be expanded in the future because one of the County General Plan's goals is to increase expenditures for library services in the communities. If the library's hours are expanded, the pipeline construction project could have an even greater impact on that facility. (2)

Councilmember Connors referred to Page 5-25 which does not address the evening use of the facilities at Joaquin Moraga and Camino Pablo School for numerous meetings and programs each week. He expressed concern about the economic hardship created by the impeded access to the Moraga Shopping Center during the construction period. He pointed out that St. Monica's Church, at the (17)

intersection of Canyon Road and Camino Pablo, has only two entrances to its parking lot, and both could be cut off at the same time. He stated that the parking lot already overflows for 1-1/2 blocks in the street, and he is concerned about where people will park if they cannot get into the parking lot. He stated that Page 5-26 addresses the Country Club Drive access. He does not know of any other way for people to get to that street without gaining access from Canyon Road. He thinks the sentence in the next paragraph, regarding the restricted access to the trail staging area on St. Mary's Road, is difficult to understand.

Councilmember Connors stated that he thinks the consultant should reconsider the siltation factor in light of the Dave Rogers reports. Those reports address a number of landfall problems in this region which should be considered.

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He pointed out that the EIR indicates no endangered plant or animal species were observed during the field survey, but scrub, which is a suitable habitat for the Alameda Striped Racer is located on the dam, spillway and plant sites. Councilmember Connors stated that there are a number of other animals, including trout, which would be impacted. He stated that peregrine falcons feed there even though they nest elsewhere. Other species, such as bobcats or mountain lions, are also moving in.

Councilmember Connors also questioned the meaning of the following sentence on Page 5-91: "The frequent truck traffic along Castro Ranch Road is not expected to disturb the geese because the nature of these noises would be rather frequent and the road is not visible from the pond."

30

He stated that he previously suggested routing the pipeline through Bollinger Canyon instead of along the city streets. However, he thinks Vice Mayor Des-sayer's suggestion of moving water from Upper San Leandro Reservoir to Buckhorn and reversing the process to let it flow back into the system, has considerable merit. He stated that the EIR does not address these or other alternatives to building a pipeline through Moraga. He added that there are also other issues for which no alternatives are mentioned because they are taken as givens. He questioned the statement on Page 5-112 that worker commute trips could be reduced by carpooling or vanpooling. He pointed out that those efforts are not always successful.

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Councilmember Connors pointed out that Moraga already has one reservoir adjacent to the community. He questioned why East Bay MUD has singled out this community for a second one. He stated that long-time residents of Moraga have indicated that there has been more fog in the community since Upper San Leandro Reservoir was built. During the past two years when the water level at the reservoir was quite low, Councilmember Connors noticed that there was less fog than usual in Moraga.

19

Councilmember Connors stated that he thinks the comments regarding geologic and hydrologic findings factors are too simplistic and understated. He again strongly urged East Bay MUD to view the videotapes made by David Rogers of Rogers-Pacific. He stated that the firm was retained by the Town of Moraga to give expert testimony in defense of Measure A. He also noted that Mr. Rogers is an expert in geology, land formation and watershed in the Lamorinda Area. Councilmember Connors also objected to the archaeological study which was allegedly conducted in the region. In speaking with people who were

21

interviewed, it appears that the principal methodology was to rely on amateur spelunkers and history buffs in the area to make a determination regarding potential impacts. He is sure East Bay MUD does not want to spend its money in that way. (23)

He also strongly objected to the relatively short period of time for this review process. He explained that he received the draft EIR about 1-1/2 weeks before the public hearing. He does not think that is adequate time for reviewing the complete document which has over 400 pages. (1)

Councilmember Connors questioned the feasibility of the proposed mitigations. He pointed out that there are limits on what can be successfully engineered. He also stated that while animals may be relocated to a new habitat, it may be difficult to get them to accept and adapt to it. He stated that he is totally opposed to this project. (27)

Councilmember Crossley agreed that the EIR is inadequate. He stated that it appears that East Bay MUD has served its own purposes in creating this document. While the report is good at defining problems, he thinks it fails to consider alternatives as well as to define and discuss mitigation measures. He pointed out that there are references to a document prepared for Los Vaqueros, but that document was not included in the EIR. He noted the wide ranges in capacity mentioned for Los Vaqueros and Buckhorn Reservoirs. (32)

He is also concerned about the expansion of East Bay MUD boundaries during a period of water shortage. He considers that to be irresponsible. He acknowledged that some growth will occur within the current East Bay MUD boundaries, and he thinks East Bay MUD should only be planning for that growth. He stated that the report included no information regarding such limited and planned growth and whether Buckhorn or Los Vaqueros would be the best alternative under those circumstances. (2)

Councilmember Crossley stated that the data presented by Mr. Abers regarding earthquakes in the vicinity of the Buckhorn site seems to indicate that the faults running through there are active. He does not think East Bay MUD has given adequate consideration to the earthquake aspect in this area. (24)

Councilmember Crossley expressed concern about the truck traffic which would be generated by this project and asked if East Bay MUD plans to provide funds for a policeman to police the truck drivers and for scales to weigh trucks which will damage the roads. He also asked if East Bay MUD will repair the roads completely. While the report indicates that impacts will be temporary, Councilmember Crossley pointed out that two or three years in a child's life is a long time. (27)

Mayor Kendall agreed with most of the comments made by the other councilmembers. She particularly agreed with the statements made by Vice Mayor Dessayer and Councilmember DePriester regarding the EIR. She agreed that the impacts of East Bay MUD's expansion policy is not addressed at all in the EIR. She thinks the impacts are often understated and the mitigation measures are inadequate. In her opinion, many of the suggested mitigations do not even qualify as appropriate mitigations for the impacts which are outlined. She thinks the EIR does not adequately address the fact that the very few benefits of Buckhorn Reservoir for Moraga are far outweighed by the adverse impacts on the community. She also thinks alternatives for the pipeline through Moraga should be (27)

considered and addressed in the EIR. She thinks this report is far from adequate and sufficient.

Upon a motion by Councilmember Crossley, seconded by Vice Mayor Dessayer, it was unanimously agreed to direct Staff to submit the minutes of this meeting, along with all correspondence related to this subject and a copy of the David Rogers videotape, to East Bay MOD on or before June 17, 1988.

III. ADJOURNMENT

The meeting was adjourned at 10:25 p.m. to June 15, 1988.

Mayor

Clerk

RECEIVED

JUN 15 1988

TOWN OF MORAGA

6.15.88

EBMUD Board of Directors
P.O. Box 24055
Oakland, CA 94623

Moraga Town Councilmembers
350 Rheem Blvd.
Moraga, CA 94556

EBMUD Water Supply Management Program Draft EIR and
Technical Report April 1988

Gentlemen,

The following comments refer to specific pages and are presented in the order in which they appear in the indicated documents:

Draft Environmental Impact Report

5-21 It is my understanding that the site selected for the Buckhorn pumping plant is indeed the site of the condemned, abandoned, and buried sewage disposal plant which is located just below the LaSalle Lake Dam at St. Mary's College. If this is indeed the case shouldn't it be so stated? In addition, since the Town of Moraga considers LaSalle Lake part of a scenic corridor, shouldn't the councilmembers be informed and involved in assessing the impact of this choice?

5-38 This is a very interesting map. However, it raises more questions than it answers and may have several confusing and misleading errors.

The Moraga Fault divides and goes off to the left of the map. Does this fault more or less follow Camino Pablo in the region where the 84" aqueduct is planned? Shouldn't it's effect on the aqueduct be included in the EIR?

Where Brown Ranch Road crosses a low saddle at the 760' elevation the symbol for a possible saddle dike and the number 5 are shown. In the Symbol Legend the numbers in parentheses make no sense. These should be clarified.

For clarification of the situation at the Brown Ranch Road Saddle I have referred to BORCHERDT AND OTHERS-EARTHQUAKE INTENSITY SAN FRANCISCO BAY REGION MAP MF 709 available from the Dept. of the Interior, U.S. Geological Survey. Sheet 3 of this report shows the soil at the Brown Ranch Road Saddle to be [Qal]. It is not so

shown on page 5-38 of the EIR and I believe this to be a significant error. **Qal** is defined by Bochart and Others to be "Quaternary Alluvium: Unconsolidated to weakly consolidated silt, sand, and gravel..."

- 5-46 The second paragraph on this page states that none of the faults close to Buckhorn Dam are active. This does not correlate with my memory. To clarify this I contacted:

Director of Seismographic Stations
475 Earth Sciences Building
University of California
Berkeley, California 94720

In addition to showing an increase in earthquake activity in the vicinity of the proposed Buckhorn Canyon Reservoir, their computer listed 3 earthquakes as summarized in the following table:

Date	Time UTC	Latitude	Longitude	Richter Magnitude
27 Mar 84	033635.4	37.75°	122.09°	4.3
27 Mar 84	034839.5	37.75°	122.09°	2.5
04 Sep 85	060046.7	37.75°	122.09°	3.1

Of significance is the location of these three earthquakes. Latitude 37.75° north and longitude 122.09° west is within one kilometer of San Leandro Reservoir and the Miller Creek Fault. The no reported activity statement is incorrect and suggests that this section of the EIR should have additional study.

- 5-59 I like the statement about 3 days emergency supplies for project personnel, but what about the thousands of residents that live within 1.5 miles of Buckhorn Reservoir?

- 5.60 Ninety percent of the potential landslides shown on page 5-38 are within or below the proposed Buckhorn Reservoir. How does one drain a landslide that is within or in proximity and below a reservoir? Don't these problems indicate early silting up and potential disaster for the proposed Buckhorn Reservoir? Should they not be addressed in the EIR?

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5-136 Section 5.9 of the EIR refers to archeological sites and on this page it is stated that they are in "close physical proximity to one another." Photographs of an Indian grinding rock and a petroglyph said to be near the proposed Buckhorn Dam site have appeared in the Contra Costa Sun newspaper. Additional photographs may be seen at the office of the Moraga Historical Society in the Moraga Library. Other archaeological sites including a stone foundation and an Indian grinding rock are known to exist near the 640' elevation in Kaiser Creek. The distance between the archaeological site at the dam and the site at 640' elevation is approximately 3 miles. It is not at all clear from the EIR that the artifacts at the proposed dam site or those 3 miles upstream are being discussed. This should be clarified in the EIR.

For additional information on archaeological sites the book MORAGA'S PRIDE is recommended. It may be obtained from: Moraga Historical Society, P.O. Box 103, Moraga, CA 94556.

On page 11 of Moraga's Pride a photograph may be found of the Indian grinding rock located near the proposed dam site. The EIR should indicate what would happen to this archaeological site depending on which of the 4 dam axis locations shown on page 5-38 is chosen.

Page 13 of Moraga's Pride tells of Indian burial sites near LaSalle Lake that have yielded two dozen skeletons and numerous findings of Indian relics throughout the Moraga area. Pages 14 and 15 detail the location of 16 findings. (Site 7 is in error on page 14. It is shown on the King Canyon arm of USLR. It is correctly described on the Kaiser Creek arm on page 15.)

From what is described in the first 16 pages of Moraga's Pride one gets the impression that the EIR discussion of archaeological resources in the vicinity of Buckhorn is inadequate. At the very least, the EIR should attempt to correctly locate these resources and consider the consequences of additional archaeological discoveries during construction. The effect of the various alternatives must also be considered.

- 5-153 The effect of dam overtopping by a wave
 5-154 produced by a landslide, perhaps earthquake-induced is adequately described. But what about overtopping the Brown Ranch Road Saddle? If the elevation of the Brown Ranch Road Saddle is 760' and the Buckhorn Reservoir is filled to an elevation of 745' isn't this indeed a likely scenario? Since the material of the Brown Ranch Road Saddle is not up to dam standards (BORCHERDT AND OTHERS Sheet 3), isn't it likely that failure of the Brown Ranch Road Saddle caused by wave overtopping or even a landslide on the downstream side would reach peak outflow even faster than indicated for dam failure on page 5-154?

Some of the flow would likely divert to the left and out King Canyon to USL Reservoir, but with a rapid failure is it not likely that some flow would continue over the 560' elevation saddle of Camino Pablo and into the residential section of Moraga?

Additional study of the Brown Ranch Road Saddle is needed. Review of the Video Tape prepared by Rogers-Pacific for the Town of Moraga is recommended. Review of BORCHERDT AND OTHERS Sheet 2 is also recommended. It shows predicted earthquake intensity of C = Very Strong at the Brown Ranch Road Saddle and most of the Moraga aqueduct region. What is shown on this map of Delta aqueducts is E = Weak.

Water Supply Management Program

- II-14 Where is the Green Valley fault? Could it be that the Greeville fault is intended? It is my understanding that the Greeville fault is an excellent example of an "inactive fault" where stresses built up to the point where several significant earthquakes were produced in recent times. This characteristic of "inactive faults" should also warrant inclusion of the Moraga Fault in the EIR Analyses.

The chart on page II-14 is excellent. For proper evaluation of the alternatives in the EIR it is recommended that additional columns be added showing Peak Ground Accelerations at locations of proposed terminal resevoirs and aqueducts.

- V-23 There appears to be very little head loss with

105 MGD flow thru a 66" pipe from the Moraga pumping plant to the Buckhorn pumping plant. If this is an error, would it not result in an understatement of the pumping costs for Operation of the Buckhorn Reservoir? (16)

The Operational Grade Lines for Los Vaqueros appear to be based on greater flow rates in a smaller pipe than used for the Buckhorn Project. Why is this? Would it not result in overstatement for operation of the Los Vaqueros reservoir?

- B-1 For a more meaningful evaluation of project costs shouldn't more detail of property costs as well as the value of the submerged land be shown for each of the three alternatives? (15)

Thank you for your consideration.

Tom Buckingham

TOM BUCKINGHAM
Concerned Moraga Resident



SAIM MCKIRGAN

ARTIST-ART CONSULTANT

June 9, 1988

RECEIVED

JUN 13 1988

181 Shuey Drive
Moraga, California 94556
415/376-2917

CITY OF MORAGA

Mr. Sanford Skaggs
EBMUD Board President
2130 Adeline Street,
Oakland, Ca 94623

Re: Buckhorn Reservoir Affects All Bay Area Life

Dear Mr. Skaggs,

Together, the Directors, the employees of EBMUD and the citizens of Moraga are the caretakers of the Planet. This is the bottom line. Together we all are responsible for the care of the environment and what we do or do not do affects our futures. We can affect the ecosystems in which we live and in turn the ecosystem affects our spirits and our connection to the land.

We, the people of Moraga and I imagine most of EBMUD's Directors and employees live in the congested East Bay. Consequently we all have very little "land" to enjoy! I mean wild land close to cities and homes so that people do not have to drive to the Sierra's. Close so that city children and adults can take day trips to connect with the land that gives them life. Close wild land is important so that it can be visited. People need to see the falcons, buzzards float and wild trout jump and experience the freshness and the simplicity that city lives lack. The most important factor you must weigh when EBMUD's Directors make their decision between the three sites is that Buckhorn is closest to the city population that needs the wild space the most!

My other concerns are as follows:

1. Blasting and Dynamite noise affects people and wild life. We can hear the Chabot Gun Club "popping" in the distance. Dynamite blasting would be like living in a war zone. (19)
2. Digging of the trench at night would be extremely disturbing to sleeping children and adults who need to work and go to school. It would cause an irritable and stressful population. (16)
3. The people of Moraga have only two pieces of public land! The Moraga Commons park and the Camino Pablo park. The Camino Pablo park would most likely be useless during the seven years of Buckhorn construction due to noise and dust. The Moraga Commons would be useless during the digging of the pipeline due to dust and noise. Where are the children to play? (16)
4. Schools, a nursery school, a grammar school an intermediate school and a college ALL adversely affected with confusion, dirt, air pollution and noise. All of the children of Moraga will suffer no matter where they live in town, no matter what their age. (16)

5. A Senior Citizens Retirement Home where frail and ill people live would be adversely affected with truck traffic, noise and dust. (16)
6. Climate Change. The south end of Moraga is now the coolest part of town because it is close to the San Leandro Reservoir. It is foggy in the morning and evenings when the North end of Moraga is balmy. With Buckhorn most probably all of Moraga would be cool and the south end even cooler, and foggier. *East of Moraga - also 16 to 19*
7. East Bay Air Quality. With the digging the dynamiting of the hole and the pipeline trench the air in Moraga will be adversely affected. This bad air will be bad for everyone because air drifts, winds blow predominately from west to east or north to south. This means that the air quality can be affected in Alamo, Danville, San Ramon, Livermore and Plessanton. What dust and dirt does not settle on and in the lungs of Moraga will drift and blow to the rest of the East Bay. (16)
8. It seems ironic that the people of Moraga pay EXTRA to have water pumped up to our homes and now EBMUD wants to disturb the lives and environment mainly of Moraga for 7 to 8 years so water can flow DOWN. (19)

The creation of the Buckhorn Reservoir will be a extreme sacrifice for the town of Moraga. I do not think any community should be asked to make such a sacrifice not Pinole either. It seems that the Los Vaqueros would cause the least disturbance to the fewest lives. (19)

In closing I would like to remind the Director's of EBMUD to look at the entire Bay Area for a moment, the population density, the congestion and the problems with violence and drugs and ask yourselves: Do we really need to destroy one more blade of grass, one more scenic wild area?? We have destroyed enough of our connection to the land, our source of peace and California wild life! EBMUD can create a hole and water to flow to our homes; EBMUD cannot create wild trout, a falcon or a lowly ant. But EBMUD can do great things and the greatest of all would be to leave the Buckhorn Valley alone.

Sincerely,

Sally McKirgan
Sally McKirgan

cc/Belinda Kendall Mayor Moraga
Moraga Town Offices
350 Rheem Blvd.,
Moraga, Ca 94556

cc/ Editor Contra Costa Times
2640 Shadelands Drive,
Walnut Creek, Ca 94598

*Thanks for the
last meeting Wed night!!
Good work!*

Board of Directors
East Bay Municipal Utilities District
P. O. Box 24055
Oakland, CA 94623

31 May 1988

Dear Directors,

This letter is in lieu of my speaking at the public meeting in the Kaiser Center on 25 May. These comments deal mostly with the Environmental Impact Report.

After reading the main body of the report and the technical report, one can surmise that the total effort of the report was to focus on building the Buckhorn Canyon Dam and all other alternatives were not to be considered. Listening to the EBMUD Staff statement (until 8:30 pm) prior to the public hearing convinced me even more that Mr. Gilbert's gang of engineers want to build this dam come hell, earthquakes or high water. The report failed to mention a number of items that should have been considered and glossed over others that are very important to the environment and the local community.

It is important to all concerned that the EBMUD Directors read the EIR in its entirety and ask questions of experts, other than their engineering staff, in regards to; seismic activity, weather pattern changes, and long term potential for accidents relative to the eighty-four inch (7 feet) high pressure water pipeline which will run through the center of a residential neighborhood.

Consider the following before voting to accept the EIR draft as fact or blindly accepting the information provided by your staff of engineers who obviously want to build the Buckhorn Canyon Dam:

1. Review section 5.4.3 "Slope Instability" very closely.

- + The proposed site of the dam and reservoir rests between two known active earthquake faults, the Calaveras and the Hayward faults.
- + During an earthquake the dam may hold but the water saturated land around the dam may not and residents of Moraga, Castro Valley and parts of Hayward will be at risk.
- + Consideration has been extended to construction crews relative to seismic activity during construction but little consideration for local residents after construction.

- + Remember the last devastating earthquake in Los Angeles when freeway overpasses collapsed, the VA hospital collapsed and a dam upstream of a massive residential area had questionable reliability. No one believed, at the time, that an earthquake would react as that one did. We do not know enough about seismic activity to ask our residents to accept this risk.
- 2. Look closely at the change in weather that will occur if this reservoir is constructed. According to the EIR the local weather will change (temperature and humidity) due to a body of water this size. The San Leandro reservoir has already created a fog and humidity problem. Another reservoir will be devastating to Moraga.
- 3. Little effort was made to deal with the water conservation issue. There was a half hearted effort in Section 7, with little imagination.

+ Mr. Gilbert likes to advertise the awards EBMUD has received for its water conservation program. WHERE IS THE PROGRAM? If one did not read the local newspaper, one would not know what actions to take. Personally, I travelled to your Oakland office to get conservation information. The information was in limited supply and I was asked to travel to Alamo to my representative office if I wanted more (not very cooperative for an active conservation program). Even the EIR tells us that EBMUD is going to do something, sometime in the future. The only information I have received in the mail from EBMUD came with the last water bill and all it discussed was the new rate structure and restrictions placed on the various users.

+ Members of our community understood that residential users would be allowed 400 gallons of water a day until they read Sunday's (May 29) Contra Costa Times where they learned that there will be penalty if 400 gallons per day are used. The article, regarding a lady in Orinda, informed all that the limit was now 200 gpd. This was later confirmed by the billing information. All in all, a very poor way to inform people how to conserve water.

Again your staff failed to provide the people, who pay their salaries, with any straight forward information or alternatives.

+ Your gang of engineers runs your water conservation program like a side show that they really do not believe in and do not want to establish.

- + The EIR reminds us that rationing and conservation, when required, will provide water for CURRENT EBMUD areas in adequate quantities. If you do not have the water DO NOT ALLOW THE DISTRICT TO EXPAND AT THE EXPENSE OF MORAGA RESIDENTS.

2

4. Consider the potential damage that can be caused if there is a rupture to the pipeline running through the center of Moraga. Engineers do not like to think about or discuss potential disasters, but ruptures can and do happen to pipelines (remember the slide and Shell fuel-oil rupture in Oakland below the Mormon Temple). If you do not remember the Shell disaster, ask the residents near the Temple, I'm sure they can show you and tell you the cost related to the disaster.

16

- + During seismic activity, if a pipeline of this magnitude ruptures, many local residents would be at risk. The EIR does not mention this possibility and does not address the potential increase to home insurance rates Moraga residents may be forced to accept due to a potential new flood plane.

If you continue to think and act on the advice of your engineering gang, consider the following:

1. Little, if any, discussion addressed an alternative route for the pipeline. A more rational approach to the reservoir would be through Bollinger Canyon. The cost would be high during construction, but the potential cost of law suits by local citizens from construction accidents may make a Bollinger approach more sensible.

16

2. The streets of Moraga are not constructed to support the weight of haulage vehicles that will be needed to complete this project.

16

- + Utility companies, in the past, have resurfaced roads in our community and brought the repair only to the original surface level. Then when the repaired area settled it was rough and dangerous.

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- + We were informed by the utility that they are only required to bring the repaired surface even with the original surface. Any settling problems become the responsibility of the community. MORAGA DOES NOT NEED THIS COSTLY PROBLEM.

3. In Section 5.6 of the EIR, three (3) major points need to be addressed more fully. Schools and the shopping area were addressed adequately, however the following was not discussed or was just glossed over: (16)

- + The senior citizen's village of Moraga Royale was not mentioned. Likewise, the inconvenience to residents along the pipeline route was given little consideration.
- + The EIR addressed noise levels 1000 feet from the dam construction site (70 db) but did not address close pipeline construction noise.
- + If construction of the pipeline is going to take place during "off commute hours" and not during school and library hours, this leaves only night construction in our residential areas. The EIR failed to address this issue.

4. The suggested mitigation measures outlined in Section 5.8.3 sound great, but no mention was made as to who has the responsibility for enforcement. I worked for a large San Francisco engineering and construction company for ten years on a number of different construction projects and controlling equipment operators was a major problem, in fact it was next to impossible: (27)

- + Haulage vehicles will not hold their weight to any requirement and local law enforcement officers will have little control of this problem on our streets.
- + Haulage vehicles will not maintain posted speeds and again law enforcement officers will have little or no control.
- + Lastly, the EIR mentions controlling dust by covering loaded haulage vehicles with tarpaulins. If you cannot control weight and speed you will never control the use of a tarpaulin.

The EIR must address this potential safety problem before one of our residents become a victim.

The only thing Moraga, Orinda, and Lafayette will receive from this boondoggle is: (26)

- + Construction inconvenience for many months
- + Potential flooding
- + A change in our weather pattern (for the worse)

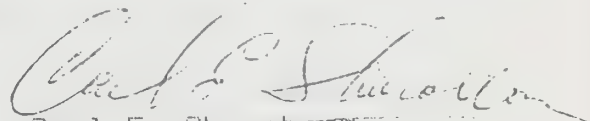
+ Possible traffic from future recreation activities
(also not mentioned in the EIR)

+ Major cost of construction

+ Little or no water at any time because it will be piped
to new expanded housing projects.

Please give serious consideration to these concerns and add
them to your review of the EIR draft.

Sincerely,



Carl E. Shanahorn

Jane B. Shanahorn



01 JUN 88

1 of 3

EBMUD WATER BOARD

WE CITIZENS MUST RECOGNISE THE DESIRES OF TODAY AND THE LONG TERM NEEDS OF FUTURE RESIDENTS AS TOP PRIORITY. IN THIS SENSE WATER AND OPEN SPACE HAVE EQUAL BILLING, ONE TO PROVIDE A LOW COST APPROACH TO LIFE-GIVING WATER AND ONE TO AN UNDETERMINED COST OF IRREPLACABLE RECREATION, NATURAL OPEN SPACE. WITH THIS IN MIND AND MY OWN ESTIMATION THAT WE NEED LARGE AMOUNTS OF WATER STORED IN THE BAY AREA, I THINK WE NEED TO PRIORITIZE WHERE TO PLACE THE WATER TO PROTECT ^{FOR} FUTURE, LARGE AMOUNTS OF THE BEST OPEN SPACE POSSIBLE. IN SUCH A LISTING BUCKHORN CANYON WOULD RANK VERY LOW. OTHER SOLUTIONS SUCH AS THE LAS VAQUEROS RESERVOIR OR AN ENLARGEMENT OF THE BRIONES RESERVOIR WOULD APPEAR MORE LOGICAL AND HIGH ON THE PRIORITY.

SECONDLY THE EIR DOES NOT APPEAR TO DISSECT THE SOLUTIONS NOR PROVIDE ALTERNATIVES DURING CONSTRUCTION THAT WILL LEAST DISRUPT THE ESTABLISHED COMMUNITIES. THE BUCKHORN RESERVOIR, IF BUILT DOES NOT REQUIRE AN 84" DIAMETER PIPE TO BE LAID BENEATH THE MAJOR ARTERIES OF MORAGA. THE PIPE COULD GO ELSEWHERE AND AVOID HAZARDOUS CONSTRUCTION CONDITIONS AND POSSIBLE MAJOR DISASTER SHOULD THE PIPE BREAK SUCH AS WITH AN EARTHQUAKE. WHAT OPTIONS ARE THERE? WHO HAS REVIEWED THEM?

CONSTRUCTION WILL ALSO REQUIRE AN UNREASONABLE AMOUNT OF TRAFFIC WITH DAMAGING EFFECTS ON THE

2/3

STUDIED IN THE E.I.R. NOR ^{WAS} ~~WAS~~ THERE MENTION OF A REDWOOD ENTRANCE CONSTRUCTION ROAD TO DRAIN OFF SOME OF THE CONSTRUCTION DAMAGE.

WE'VE ALL SEEN THE DAMAGING EFFECT OF WATER SOAKED HILLSIDES AND SLIDES. I CONTEND THAT AN EARTH FILLED DAM DESIGNED TO WITHSTAND A MAJOR EARTHQUAKE MAY BE STRONGER THAN THE HILLS. THE WEAKEST POINT FOR THE HILLS WITHHOLDING 300 FEET DEPTH OF WATER, FACES DIRECTLY DOWN CAMINO PABLO ROAD, INTO MORAGA. IF THESE HILLS, ALREADY SHOWING SIGNS OF SLIPPAGE, BECOME WATER SOAKED, WHO WILL GUARANTEE ME THAT I WILL NOT BE FLOODED OUT OF MY HOME ADJACENT TO CAMINO PABLO ROAD? (16)

WHO WILL GUARANTEE THAT I ~~AM~~ AM NOT SUDDENLY LOCATED IN A FLOOD PLAIN AND HAVE INCREASED INSURANCE RATES OR LESS COVERAGE. WILL THE INSURANCE COMPANY ALSO NOT CHANGE MY RATES WITH THE LARGE WATER PIPE IN MY BACKYARD THAT CONCEIVABLY COULD FLOOD MY HOME?

WHAT IMPACT DOES THE "UNDEFINED" FAULT, ^{HAVE} THAT PARALLELS THE HAYWARD FAULT BUT LIES BETWEEN THE CALAVERAS FAULT AND HAYWARD FAULT? THIS FAULT APPEARS TO AGAIN SHOW SIGNS OF ACTIVITY. (21)

AND LASTLY, IF THE BUCKHORN RESERVOIR WERE CONSTRUCTED, WHAT POTENTIAL DISASTERS IT MIGHT BE ENJOYING FOR

THE NEXT 100 YEARS!

MOST OF THE FOREGOING ITEMS CONCERN ME IN THE SENSE OF PROTECTING THE VERY YOUNG AND THE VERY OLD GROWING POPULATIONS IN MOAEEA. I BELIEVE THE PLANNING TO DATE IS AN ENGINEERS THOUGHTS GUIDED BY AN ECONOMICS MEASURING STICK NOT CONSIDERING THE QUALITY OF LIFE, BOTH FOR THE LOCAL POPULATION, AND FOR THE GREATER COMMUNITY. YES LETS PROTECT OUR LIFE GIVING WATERS, BUT LET'S THINK A BIT DEEPER AND NOT SO SINGLE MINDED.

Robert K. Muller
46 FREITAS DRIVE
MOAEEA, CA.

P.S. I'M MIFFED THAT I DID NOT GET TO SPEAK AT THE LAST MEETING SINCE YOU STARTED FROM THE BOTTOM OF THE DECK. MAYBE THAT IS AN OMEN ON HOW THE WHOLE THINKING PROCESS WORKS - START WITH THE SOLUTION ~~THE~~ OR TAIL END THEN FIND THE PROBLEMS THAT LEAD TO IT.

RECEIVED
JUN 07 1988
TOWN OF MORAGA

1288 Rimer Drive,
Moraga, CA 94556

June 7, 1988

Moraga Town Council

Re: Public Hearing on Buckhorn Reservoir - June 8th

Dear Members of the Council,

Unfortunately, due to previous out of town arrangements we have been unable to attend earlier Public Hearings on the EIR produced by EBMUD regarding their proposed reservoir. We would like this letter to become part of the record of your meeting on June 8, 1988.

We acknowledge the need for concern by EBMUD as to future water needs of the District but believe their approach amounts to overkill or a cover up for their longer term approval and expansion of the district's territory.

From a purely environmental point of view, we feel that the selection of Buckhorn as the site for an enormous reservoir creates the most devastation and impact by its location on the most beautiful scenic area of all those under consideration. It will result in the permanent loss of a very large area of unspoiled wooded and open countryside, far more beautiful than any of the other sites under consideration.

Having studied the complete EIR, we raise the following questions:

(1) Would the long term benefit to Moraga and central Contra Costa County support the 2-4 years of disturbance, disruption of our daily lives, damage and destruction of our local streets and environment? (22)

(2) The report states that "local climate in the vicinity of the reservoir may be slightly altered....temperature differences could be as much as 5°F (see pg 5-126). It is a known fact that large bodies of water create climatic changes (19)

(3) The cost of \$152 million to construct Buckhorn is based on 1988 prices with no cost of living inflation factor (see pg 5-6) (15)

(4) No mention is made of earthquake safety or flood control at Buckhorn, although on page 5-6 and 5-32 spillway capacity at Pinole and Los Vaqueros is projected capable of handling 1-1,000 year flood. No similar numbers or projections are given for Buckhorn. (21)

Cont'd....

(5) Air quality would be affected during the four year construction period - from dust, carbon monoxide from vehicles to brush burn off (see page 5-127). While the EIR suggests mitigating measures such as limited truck speeds on dirt roads, covering haul trucks to prevent dust and falling debris, implementation and enforcement would be difficult and costly and who would be responsible for monitoring these measures? Although the reports states that work would be done during normal working hours, it also states that doubling up on shifts would be expected. From our personal observation recently, dump trucks hauling fill between Orinda and Briones Reservoir was neither considerate of local traffic, hikers and equestrians and was being conducted on a Saturday and Sunday. Who bears the cost of local enforcement? Moraga, San Leandro, Castro Valley, EBMUD?

IF a new sixth reservoir is needed solely as a precautionary safeguard against such emergencies as a break in the aquaduct or a long term drought, why is the District proposing a reservoir capable of storing 145,000 acre feet (more than double the present storage capacity), at a cost far exceeding any other solution and in a location which would not serve the largest area of the District, i.e. Central and Eastern Contra Costa?

Building the largest reservoir possible does not support the need for or enhance the effort to enforce conservation through regulation (i.e. new building/plumbing regulations etc.)

Since this EIR does not include the Los Vaqueros reservoir it is not possible to analyse the cost/benefit ratio of bringing Mokelumne water to that location, thus upgrading that stored water besides sharing the cost of building that facility. Nor does this report take into account the acceptance by water consumers of a limited time use of lesser quality water, nor does it compare the lower costs involved in upgrading Delta water during any future emergency.

What evidence is there to support the view that consumers would rather see EBMUD embarking on any of the proposed reservoir projects rather than accept a temporary reduction in the quality of the water supply during an emergency break in the aquaduct?

Finally, on pages 4-2 and 4-3 they acknowledge that alternate sources of water would be available during such an emergency although it would be of lower quality than Mokelumne. The enormous cost of ensuring this high quality of water even during an emergency does not equate with responsible fiscal management on a year round, long term basis.

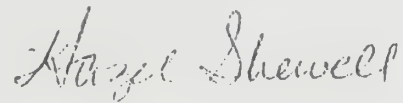
In conclusion, we feel that the EIR does in fact demonstrate that a reservoir at the Buckhorn site would have a detrimental impact on the Moraga area as a whole, and that before such a monumental capital project is undertaken, the authorities should give

Cont'd...

- Page Three -

further consideration to the use and treatment of available lesser quality water during any future emergency.

Yours sincerely,

A handwritten signature in cursive script that reads "Hazel Shewell".

Hazel (McClearnen) Shewell

A handwritten signature in cursive script that reads "Paul Shewell".

Paul F. M. Shewell

copy to Board of Directors
E.B.M.U.D.



The Mulberry Tree Preschool
1455 Saint Mary's Road
Moraga, CA 94556
(415) 376-1751

RECEIVED

JUN 06 1988

TOWN OF MORAGA

June 6, 1988

Mr. Richard L. Kolm
Asst. Chief Engineer for Planning
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

Dear Mr. Kolm:

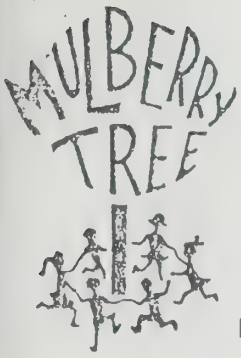
I am the owner of a business that will be affected by your digging of a pipeline along St. Mary's Rd. for the Buckhorn Project. Your environmental impact report states that the effect to business along the route "would create undesirable but short term environmental impacts" The idea of noise and dust in our school is intolerable, even for a short time. I am concerned about health problems, such as allergies, that would emerge because of dust in the air. In addition, to children affected by the situation it is not short term, but a permanent part of their early childhood education experience. (16)

The traffic problems outlined would be very difficult and would affect one hundred families, not fifty as noted in your report. The school is licensed at a capacity of fifty children at one time but one hundred families are served by our program. The school would be affected by more than the actual digging in its immediate area. Traffic diversion along all of St. Mary's Rd. would affect traffic flow to our school. This is a long term inconvenience lasting several months.

I am also concerned about a safety issue. In addition to the equipment and traffic congestion an open ditch will run along side of my school, the park and jogging trail used by children of all ages. What will be done to protect children as they explore the ditch and unattended construction equipment?

Another more subtle but significant result of the mere discussion of the Buckhorn Project has been a loss of business on my part. The only source of income for my business is tuition from parents. I currently employ fourteen local men and women, some of whom are college and high school students. If I do not have sufficient enrollment these people could lose their positions.

I depend on my hard earned reputation as an outstanding school to attract families and keep my business stable. What I am finding as prepare to enroll students for the future is that parents are asking me questions about the Buckhorn Project. Some of these are: "What



The Mulberry Tree Preschool
1455 Saint Mary's Road
Moraga, CA 94556
(415) 376-1751

kind of assurances can I give them about the quality of education during the time of construction?", "Do I realize that an open ditch will be near the school where the children play and walk?" and "Am I aware of the inconvenience the proposed digging will be to their family?". Parents have the right to be concerned about their child's education and safety. In fact no matter how good the reputation of the school, they will not put up with the inconvenience they invasion with St. Mary's Rd. torn up.

I have taken a recent telephone survey and have found all current early childhood programs in our area are full and the need for the facility does exist. Your proposed plan is putting my business in jepardy. This program serves a real need to the local community.

Your ideas of the "short term effect" the Buckhorn Project has on my business are greatly underated. I am, as a matter of fact, facing them now in a financial way as I talk with parents who have concerns about the future quality of my program.

I believe you have greatly underestimated the problems this one small buiness is facing because of the Buckhorn Project. Because you minimize the problems facing my business you have led me to seriously doubt the other inferences you have made regarding the E.I.R to the local community.

Sincerely,

Mary Ann McLeod

Mary Ann McLeod

May 4, 1988

To: Lafayette City Council Members
From: Gayle B. Uilkema

Re: EBMUD/400 gallon rationing limitation

After attending the May 3, 1988 meeting of the Contra Costa Mayors in Orinda, it became very clear to me that the protests and concerns of Contra Costa residents will remain unheard by the EBMud Board of Directors. The seven Mayors were eloquent in their statements which reflected the concerns of their constituents. It is obvious, however, that pleas for equity were falling on deaf ears. 3

It is a credit to Contra Costa that a reasonable request for reconsideration of the 400-gallon decision was made in such a unified manner. It is clear, however, that we may need to do much more--and in a more forceful manner if we are to attempt to avoid the severe economic losses which our residents face.

The purpose of this letter is to explore Lafayette City Council thinking regarding the establishment of a Water Legal Defense fund. I would suggest that each of the seven cities represented at the Orinda meeting be asked to consider an allocation of \$1,000 and to begin working as a group to hire a water rights attorney. Perhaps, after selection of an attorney, we can immediately pursue a recommended course of action which may include seeking a restraining order on EBMUD's proposed rationing. Someone skilled in this field would also have many other suggested alternate courses of action, I am sure.

The purpose of this memorandum is to explore Lafayette's willingness to initiate and participate in such a course of action. When we view the consequences of punitive rationing, I cannot help but think that it would be money well spent.

It is clear that individual customers have little or no recourse in this situation. It is apparent that the EBMUD directors feel little or no responsibility to the Contra Costa residents. I suggest that collective legal action may be our only fruitful course of action.

I would like to discuss this matter at the earliest possible opportunity.

Respectfully submitted,

Gayle B. Uilkema
Gayle B. Uilkema

RECEIVED

MAY 13 1988

TOWN OF MORAGA

May 13, 1988

Mayor Belinda Kendall
Town of Moraga
350 Rheem Blvd.
Moraga, CA. 94556

Dear Mayor Kendall:

The water district's plan to allocate the same amount of water to households throughout the district is discriminatory. Households on the cooler, foggier west side of the Caldecott Tunnel need less water and may not have to cut back at all. In the hotter areas of Contra Costa east of the tunnel, large lots and extensive landscaping need much more than 400 gallons of water daily.

3

Last Monday night, the Lafayette City Council pledged up to \$5,000 to battle EBMUD's water rationing plan and invited other cities and residents to join in. I have never run into an issue in this city that has generated this much reaction. People are outraged and I think properly so.

I fully support Lafayette's plan to start a legal fund. I am requesting that the Moraga Town Council vote as soon as possible to support the legal fund along with private donations.

The voice of reason must prevail. I am requesting your support.

Sincerely,



Dennis Myrick
169 Natalie Dr.
Moraga, CA. 94556

FRANCES CHRISTOFFERSEN

26 Laird Drive
Moraga, California 94556
(415) 376-3661

RECEIVED

MAY 16 1988

TOWN OF MORAGA

Dear Mrs. Kendall-

I read in the CC Times Thursday
May 12th that you will have a
meeting with the Town Council regarding
the possibility of Moraga joining with
neighbor cities in a legal approach
to a protest of the water rationing plan⁽³⁾
of E. B. M. V. D. I urge you to "join
the bandwagon"!

My elderly father lives in San Leandro.
He never uses more than 100 to 150 Gal
a day and yet will be allotted 400 Gal.
He agrees, as we do, that the present
rationing plan is ridiculous. We in
contra Costa are going to carry the
burden of this entire shortage while
the east bay will have water to
waste. (I can get really emotional
just thinking about it!)

at any rate, I offer my services

to help in any endeavor to assure
successful litigation against EBMVD.
I can man the phone, help with
mailers, gather signatures - whatever -
but, please, lets join all the
others who realize this is an
unfair way to ration water
not to mention destruction.

Thank you

Mr. + Mrs. Merrill
Chudoffers

805 LAS JUNTAS
MARTINEZ, CALIFORNIA 94553
(415) 372-2080

3338 MT. DIABLO BOULEVARD
LAFAYETTE, CALIFORNIA 94549
(415) 284-4733



NANCY CARDINALLI FAHDEN
Contra Costa County Board of Supervisors
Supervisorial District Two

4300 GARDEN ROAD
EL SOBRANTE, CALIFORNIA 94803
(415) 222-2822

RECEIVED

MAY 10 1988

JOHN OF MORAGA

April 27, 1988

LETTER TO EDITOR:

The drought and water rationing plans being drawn up have brought a very different response this year than in 1977 when we all went through it together. It has the potential of becoming an hydrological civil war with neighbor pitted against neighbor, cool climate dwellers against hotter inland dwellers, people with large landscaped lots against apartment dwellers, water district against water district. It puzzles and worries me, since our own immediate needs cause us to forget the real culprits and agencies that should really be taking the heat.

Perhaps EBMUD could blend Delta water with Mokulumne River water. There's one problem. The same folks who brought us Kesterson with deformed birds and high selenium levels in Delta fish and wildlife are still going to be pouring water all over their fields in the reclaimed deserts of the Central Valley. That's because the unaccountable bureaucrats at the Bureau of Reclamation and the Metropolitan Water District signed contracts with the irrigation districts to supply basically the usual amount as a normal year.

-more-more-more

Letter to Editor
Page Two

So Delta water heads South to irrigate surplus cotton that is exported to China where it is made into cloth then sent back here to the States where it puts American textile workers out of a job. How's that for logic? Then, of course CCWD has water that is saltier and more polluted and more expensive to treat.

Then LA's Metropolitan Water District is proposing only minimal rationing. They, too, have signed contracts for Northern California water. For awhile they have the cushion of Colorado River water. When that's gone, will they raid us further:

Northern Californians are not without blemish. For example, Sacramento doesn't meter its water. You can use all you want and nobody is going to charge you more or put a flow restrictor on your water service. There's a bill before the legislature to require all water districts in the State to meter their water. In Contra Costa County, we need to let our State legislators know that we support that legislation.

-more-more-more

One long-term solution that I hope our State and Federal officials will consider without delay is tax breaks and incentives for irrigating crops with drip irrigation or other low flow devices. It's uncomfortable to take a Navy shower while remembering that over 90% of California's water goes to agribusiness at bargain basement prices. (10)

Another approach that can be done at either the State or County level is to develop new standards for industries to induce them to use reclaimed water. Older industries could be given tax incentives to redesign their processes to either use less or reclaimed water. (10)

While we have to deal with the drought here in Contra Costa County, I hope that residents will contact their EBMUD or CCWD elected officials and encourage them to plan for the next drought by getting involved in the larger State and Federal water plans.

There's no question in my mind that fairness must prevail if we are to get through the drought together. That fairness will be easier to achieve if our locally elected water officials begin a frontal assault on the wasteful State and Federal water practices that give so much water to so few for so little money.

Orinda CA. 94563.

The E.B.M.U. District
Board of Directors.

5/9/88.

Subject: The rate structure for water and related matters.

I listened very carefully to all that was said at the hearing 5/3/88 ^(mayors and directors) at the Orinda Community Center, and these are some of my conclusions.

The rate structure as proposed is patently unfair. Forget this East-West nonsense. The rate structure is punitive and discriminatory because

a) It does not take into account lot sizes.

b) It ignores climactic differences.

c) It favors the rich, who can consume all the water they want at the punitive rates, with 10% cut above 1200 gals.

d) The commercial, industrial and agricultural users have to cut back their consumption by only 17%, but keep their preferential rates.

e) Hot climate users, and suburbanites with extensive landscaping have to cut their consumption by an average of 50%, whereas cooler areas, apartment dwellers etc. have a bonus and have more than adequate allotment at low rates.

f) It discriminates against the ^{large} big residential users by means of punitive rates.

g) All E.B.M.U.D. personnel should have their salaries, paychecks etc. cut by 25%.

h) All EBMUD directors should have their expenses or whatever cut by 25%.

The above processes are called sharing the pain.

Limit to Cuts

A specious argument presented at hearings i.e. we can't cut across the board of say 25% because many customers have decreased their consumption since the last drought and cannot decrease further. Absolutely right.

Any customer that is using water at 25% below the average consumption for his/her lot size, climate and size of family will not be required to reduce consumption further.

Staff rate structure, allocations.

The staff recommendation of an allocation that is based on average predrought consumption by zones is sound. This allocation is to take into account climate, lot size and family size. The rate structure has to be carefully worked out to be fair to all users. There is nothing in the constitution that says everyone must have the same lot sizes, and landscaping or lack thereof, and live in the same climate.

What price water?

Since 1983 E.B.M.U.D. had innovative methods of increasing rates — especially for hot, hilly areas — such as elevation charges, meter charge increase in block rates, and of course paying off bonds for further expansion of facilities.

The price of water has increased from 45¢ per 100 cu. ft.

in 1983 to 820¢ per 100 cu ft. in 1987 or 82.2% increase in just 4 years. Seniors, and others on fixed incomes, and avid gardeners are feeling the pinch.

What does revenue neutral mean?

It is alleged that the proposed rate structure is designed not to produce ^{an} increase of revenues.

Thus with anticipated decrease of consumption the punitive rates for the large residential users will increase the revenues. There will be a smaller increase for all customers, except for the first block of 200 gals/day.

It is the customers who use large quantities of water, that has kept the costs down, or in a sense subsidized the city dwellers. Now in a time of crisis they have to pay more again.

What about when the drought is over? Will there be a reversal to the original rate structure, or will the large residential users be hurt again?

A question of management policy?

E. B. M. U. D. is entitled to 325 m.g.d. from the Mokelumne river, and in 1986 used 216 m.g.d. leaving a surplus of 109 m.g.d. We had a drought in 1976-77, and now we have another one in 1987-88.

Why did not the management of E. B. M. U. D. anticipate the drought of 1988, and kept the terminal reservoirs at near capacity by pumping all through the fall and winter of 1987, and the spring of 1988?

E. B. M. U. D. is placed on notice that there could be another dry year in the 1989 season, and is warned to keep those pumps going all year round.

How real is the shortage of water?

2 If we are so short of water, how come EBMUD continues
3 to sell large amounts of water to Brentwood, Port Costa,
4 Contra Costa Water District and others?

5 Let us not forget that in the 1977 drought, when we had
6 severe water rationing, EBMUD supplied Marin County
7 residents with water by means of a large pipe laid
8 across the Richmond-San Rafael bridge.

9 Why has not EBMUD been pumping Delta water to its
10 Comanche reservoir which serves irrigation customers
11 in the winter of 1987 and spring of 1988 in anticipation
12 of a second dry year? This increases the amount of
13 water from Pardee Reservoir for its East customers.

14 EBMUD should be prepared to use an allocation of
15 134 m.g.d. of American River Water as soon as it is
16 available—pending litigation.

17 We can always pump Delta water in an emergency. Do
18 we have the pumps and distribution facilities in place
19 if we need to?

20 EBMUD has the primary obligation to its existing
21 customers, but its policy is to annex territory to serve
22 water to new customers, when as is well known its
23 present customers has cut consumption since the last
24 drought to create a surplus.

25 Thus EBMUD indirectly is responsible for clogging
26 our streets with more traffic than we can handle,
27 because by supplying water to new customers it is
28 promoting more residential and commercial growth.
29 Consumers please check all numbers with EBMUD.

What now E.B.M.U.D.?

It is time for a change. The California legislature should place E.B.M.U.D. under the umbrella of regulation by the California Public Utilities Commission. The C.P.U.C. has the staff, experience and knowledge of regulating water utilities — which they have done for many years.

It is too big a job for citizens with limited time and expertise to monitor such a big agency.

A few days ago 3 documents on "The water supply management program" were released to the public. They covered hundreds of pages on a draft E.I.R., technical report and a summary, written by dozens of experts. Public hearing has been set on 5/25/88 and written comments by 6/17/88 by the E.B.M.U.D. These documents took 15 months to prepare by many professionals. Does the public have a chance to make intelligent comments in the short time frame that has been allowed?

My understanding is that there have been threat of lawsuits. In the "sue happy" society, this has to be taken seriously.

Class action lawsuits seeking damages could be initiated by individuals, or groups or cities for loss of landscape and financial hardship against the district, directors — individually and collectively — and the management staff on the grounds of negligence or whatever. Why should this risk be taken?

I strongly urge the board to reconsider their action on the allocation of water, and the rate structure

Al Silbert.

C.C. Town councils Orinda, Moraga, Lafayette, Walnut Creek, Danville.
Board of Supervisors (C.C.) Assemblyman Bill Baker San Ramon

May 12, 1988

RECEIVED
MAY 1 21988
TOWN OF MORAGA

To the Mayor and Town Council:

We understand from today's Oakland Tribune that Moraga has been asked to appropriate town funds to prepare a legal challenge to EBMUD's plan to limit water use.

Please do not use our town funds to subsidize this effort. We offer the following reasons for declining this expenditure:

1. The impaired fiscal condition of the town after the costs of defending the challenge to our growth restrictions precludes non-essential spending.

2. We have no experience yet with the new water conservation measure, as it does not become effective until June 1.

3

3. It is readily arguable that the EBMUD scheme is a reasonable way to stimulate conservation by putting greater pressure on the heavier residential users and by strongly discouraging wasting this currently scarce resource.

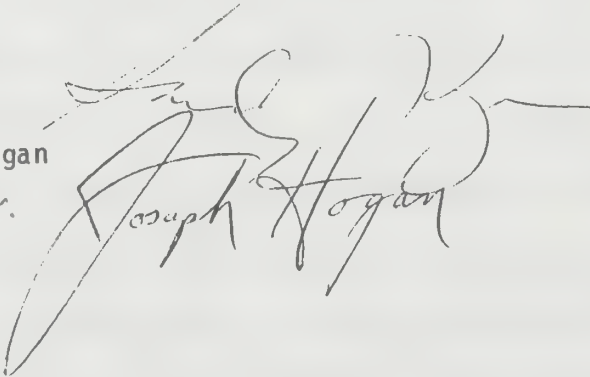
You may also want to consider the possibility that a successful EBMUD conservation program may demonstrate that in 1988, just as in 1978, serious conservation will be sufficient, and Moraga will not have to deal with the many negative effects of building the Buckhorn Canyon reservoir.

Sincerely,

Joseph and Sandy Hogan

237 Corliss Dr.

376-6808

A large, stylized handwritten signature in dark ink, appearing to read "Joseph Hogan". The signature is written over the typed name and address.

**Mrs. Gerald Magnaghi
3951 Paseo Grande
Moraga, CA 94556**

RECEIVED
MAY 9 1988
TOWN OF MORAGA

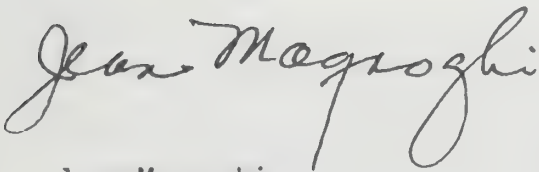
May 6, 1988

Moraga Town Council
Mayor Belinda Kendall
350 Rheem Blvd
Moraga, California 94556

Our family would like to protest the unfairness of EBMUD's water rationing plan.

3 Why must a family be discriminated against? Under the proposed plan a person living alone will receive the same amount of water as an entire family. Are we unrepresented in this matter?

If fairness were applied, a certain percentage of normal use would be used.



Jean Magnaghi
(Mrs. Gerry)

RECEIVED

MAY 9 1988

May 4, 1988

TOWN OF MORAGA

TO MAYORS OF MORAGA

To: - Mayors of Danville, Lafayette, Orinda, Walnut Creek and Moraga
- All Directors of E.B.M.U.D.
- General Manager E.B.M.U.D.

(3) Now that the dust has settled on East Bay M.U.D.'s decision on water rationing, I believe that we must look to what is going to happen in the future. Since this has happened twice in 10 years, I think that with the ever increasing population, we must recognize that it will happen again, with possibly ever increasing frequency. Also, as long as the people in the Alameda Co. portion out number the people in Central Contra Costa Co., Contra Costans will always get the short end of the deal.

(10) I have one suggestion that may solve the problem. A separate water district should be set up in Central Contra Costa through condemnation proceedings, or elections or other legal means. This district could contract/purchase water from E.B.M.U.D. with a contract guaranteeing the new district would be cut back at a percentage no greater than what E.B.M.U.D. cuts itself back, in event of drought.

(10) At the same time the new Central Contra Costa Water District would have emergency pipe connections to the existing Contra Costa Co. Water District as a leverage against E.B.M.U.D.-in event of renegeing on their contract or raising rates exorbitantly.

(10) I believe this situation would be much better for Central Contra Costa County and obviously could not be any worse than the present situation. E.B.M.U.D. should take note of the fairness of the S.F. Water Dept. to their outside customers in the hot areas of the Santa Clara Valley. The E.B.M.U.D. Board did not have the courtesy to have this fairness even within their district.

Because E.B.M.U.D. is not a private utility, we do not have recourse to the surveillance of the State Public Utilities Commission. Thus we do not know how valid E.B.M.U.D.'s rate structure is. I believe the staff of E.B.M.U.D. is trying to do a good job. However, I think perhaps the Board may be becoming urban politicized. This is a situation that has caused the decline of A.C. Transit and BART. The sooner we remove ourselves from this situation, the better.

Also, I think all water districts in California should think about building more dams. We have to start thinking more about the environment where we live and not just the areas where few people see.

Thank you,

H.T. Nelson

H. T. Nelson, P.E.
2367 Fish Creek Place
Danville, Ca 94526

TO: BOARD OF SUPERVISORS
FROM: Supervisor Robert I. Schroder, Chair



DATE: April 26, 1988

SUBJECT: East Bay Municipal Utility District Water Rationing

SPECIFIC REQUEST(S) OR RECOMMENDATION(S) & BACKGROUND AND JUSTIFICATION

RECOMMENDED ACTION

That the Board of Supervisors initiate a task force comprised of representatives from the cities of Orinda, Lafayette, Moraga, Walnut Creek, Danville, San Ramon and Contra Costa County to pursue a reconsideration of East Bay Municipal Utility District's decision on water allocation as being arbitrarily discriminatory.

BACKGROUND

3
E.B.M.U.D.'s decision to apply a uniform allocation of water is extremely punitive and political. E.B.M.U.D.'s figures reflect the average daily use in cool climate areas as 285 gallons and in the warm climate areas as 865 gallons. Therefore, the most equitable reduction of water would be to apply a flat percentage figure across the board for each user in the EBMUDistrict.

THIS MATTER WILL BE ON THE MAY 3, 1988, AGENDA OF THE BOARD OF SUPERVISORS.

CONTINUED ON ATTACHMENT: _____ YES

SIGNATURE: _____

_____ RECOMMENDATION OF COUNTY ADMINISTRATOR

_____ RECOMMENDATION OF BOARD COMMITTEE

_____ APPROVE _____ OTHER

SIGNATURE(S) _____

ACTION OF BOARD ON _____ APPROVED AS RECOMMENDED _____ OTHER _____

VOTE OF SUPERVISORS

_____ UNANIMOUS (ABSENT _____)
AYES: _____ NOES: _____
ABSENT: _____ ABSTAIN: _____

I HEREBY CERTIFY THAT THIS IS A TRUE
AND CORRECT COPY OF AN ACTION TAKEN
AND ENTERED ON THE MINUTES OF THE BOARD
OF SUPERVISORS ON THE DATE SHOWN.

CC:

ATTESTED _____

J.R. OLSSON, COUNTY CLERK
AND EX OFFICIO CLERK OF THE BOARD

City of San Ramon

2222 Camino Ramon
San Ramon, California 94583-1350
(415) 866-1400
May 16, 1988

Resolution 88-65 - A Resolution of the City Council of the City of San Ramon Requesting Modification to the EBMUD Water Conservation Policy and Recommending Development of a Comprehensive Waste Plan - was adopted by the City Council at its May 10, 1988 meeting.

If you have any questions regarding the resolution please do not hesitate to call.

Sincerely,


Diane Schinnerer
Mayor

3

/jm

RESOLUTION NO. 88-65

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SAN RAMON REQUESTING MODIFICATION TO THE EBMUD WATER CONSERVATION POLICY AND RECOMMENDING DEVELOPMENT OF A COMPREHENSIVE WATER WASTE PLAN

WHEREAS, the proposed EBMUD district water allocation policy is both inequitable and punitive to arid climate residents and

WHEREAS, following the 1976-77 drought, EBMUD has had approximately 11 years to plan and execute a successful water management plan for the district that would not necessitate rationing, and has failed to do, and

WHEREAS, residents of the arid climate within the EBMUD boundaries have historically taken the initiative to voluntarily conserve water since the 1976-77 drought and

WHEREAS, residents of the arid climate therefore recognize the need for all water users in both arid and non-arid climates to conserve water, and

WHEREAS, the proposed EBMUD drought allocation system is not a proper from of water management, and

WHEREAS, the proposed EBMUD drought allocation plan does not recognize the difference in climate, density, and household size,

NOW, THEREFORE the City Council of the City of San Ramon does hereby respectfully request that the EBMUD Board modify its proposed drought allocation policy to include the following:

1. That EBMUD drop its punitive water allocation method and adopt an allocation method based on a percentage of previous year usage.
2. That EBMUD reconsider its proposed allocation reduction for public agencies to at least be equal to the commercial limitation but no less than 75% of the previous year allocation.
3. That EBMUD adopt as part of its allocation policy a commitment to return to the previous rate structure when the water rationing plan is terminated.

RECEIVED

MAY 23 1988

TOWN OF MORAGA

May 19, 1988

Mr. Graig Crossley
Mayor
Town of Moraga
P.O. Box 188
Moraga, CA 94556

Dear Graig:

With the water shortage and the prevailing attitude of the EBMUD Directors, it is apparent that their inequitable policies of rationing water this summer are going to go into effect.

Having followed this situation for the past two months, it appears reasonable compromise on the part of the EBMUD Directors is out of the question and if we are as users of EBMUD water in Contra Costa County going to have any consideration, only the Courts will be able to accomplish this.

By copy of this letter, I urge you and the other Town Counsel Members, to consider joining Lafayette and Walnut Creek in support of litigation for relief.

Thank you very much. I hope your election campaign is successful.



Trevor C. Spencer
15 Kings Crown Court
Moraga, CA 94556

cc: Gary Chase

RESOLUTION NO. 88-18

A RESOLUTION OF THE CITY OF ALBANY URGING THE EBMUD TO IMPLEMENT PROGRAMS DESIGNED TO REDUCE THE EFFECTS OF WATER SHORTAGES UPON THE DISTRICT

WHEREAS, 1987 was the fourth driest year on record for the East Bay Municipal Utility District (EBMUD), and

WHEREAS, 1988 has the potential to become the second driest year on record for EBMUD, and

WHEREAS, EBMUD is now considering various water allotment plans to reduce summer water consumption and to increase carryover storage for 1989, and

WHEREAS, all the allotment plans under consideration will cause great hardship and financial loss to individual customers and animosity between different geographic areas of EBMUD, and

WHEREAS, options exist which could greatly increase EBMUD's water supply such as (1) purchasing treated water from the Contra Costa Water District and (2) reserving all Pardee Reservoir supplies for EBMUD by providing Mokelumne River appropriators in the San Joaquin Valley with water pumped from the Delta, and

WHEREAS, a significant increase in the water supply would allow EBMUD to structure an allotment plan which encourages conservation but which does not cause undue hardship upon its customers,

WHEREAS, within the past two years EBMUD officials have made presentations to the Albany City Council representing that EBMUD would not have water shortages due to drought and desired to annex areas outside its service boundaries and spheres of influence; and

WHEREAS, the EBMUD officials expanded its service areas in an irresponsible manner, thus creating an inability to respond to drought situations,

NOW, THEREFORE, BE IT RESOLVED by the City Council that the City of Albany urges EBMUD to act as needed to increase this year's supply of water, provided that such water meets all health standards after treatment, and be it further resolved that when such temporary supplies are assured, EBMUD, if rationing is required, should institute an allotment system which treats all constituents of the District equally and does not penalize persons for having conserved water in the past years, and be it further resolved that a copy of this resolution be transmitted to the EBMUD Board of Directors.

BE IT FURTHER RESOLVED, that the Albany City Council calls for the resignation of all EBMUD Board Members, except for Helen Burke who has voted responsibly against the expansion of service.

Robert C. Cheasty
ROBERT C. CHEASTY, MAYOR

5/11/88
3
CONSENT



City of Albany

1000 SAN PABLO AVE. • ALBANY, CALIF. 94706 • TELEPHONE 644-8523

OFFICE OF THE CITY CLERK

Resolution No. 88-18

PASSED AND APPROVED BY THE COUNCIL OF THE CITY OF ALBANY, THIS
11th day of April, 19 88, by the following
votes:

AYES: Councilmembers Ganong, Kruse Nichols, McManus and Mayor Cheasty

NOES: None

ABSENT: None

WITNESS MY HAND AND THE SEAL OF THE CITY OF ALBANY, THIS
12th day of April, 19 88.


JACQUELINE BUCHOLZ
CITY CLERK

April 15, 1988
276 Donald Drive
Moraga CA 94556

Town Council
Town of Moraga
Moraga CA. 94556

Re: Buckhorn Reservoir

Dear Council Members,

I support the concept of a new reservoir at Buckhorn Canyon. It will enable us to better prepare to handle drought conditions that will inevitably occur again in the future. (6)

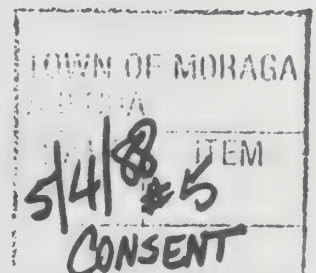
When you review the environmental impact report in May, you should remember that the inconveniences that the Town would have during the construction period are temporary. Obviously the issues of traffic and wear on Moraga roads and facilities should be mitigated to the maximum extent feasible. The long term benefits to the East Bay of having additional water storage should be a major consideration in your deliberations, however.

It is my understanding that the historical and archeologically significant artifacts found in the Buckhorn valley area will be removed and preserved if the reservoir is to be built. This would be an constructive consequence of the project. (23)

In determining the position of the Town of Moraga on the proposed Buckhorn Canyon Reservoir, I urge you to consider the long term benefit of having additional water storage capability. Our area is subject to periodic drought conditions, and has the capability of experiencing considerably drier and longer drought periods in the future. This consideration should be kept in mind against the temporary inconveniences that would occur during the construction of a reservoir. (6)

Sincerely,

John Lagarias
John S. Lagarias



P 61



MORAGA HISTORICAL SOCIETY

ARCHIVE
Moraga Library
1500 St. Mary's Road
Moraga, CA. 94556
Maggie Skinner, Archivist

APRIL 11, 1988

Jerome B. Gilbert, General Manager
East Bay Municipal Utility District
P. O. Box 24055
Oakland, CA. 94623

Mr. Gilbert,

Re: Possible Buckhorn Canyon Reservoir and flooding of
Buckhorn/Kaiser Creek/Redwood area.

The Moraga Historical Society includes the history of Buckhorn/Kaiser Creek area and the Community of Redwood Area in our Archives. Eventhough Redwood is located in Alameda County and not within the surveyed boundary of our Moraga Rancho Laguna de los Palos Colorados, the Redwood area is historically tied to Moraga. The original southern boundary of Joaquin Moraga's Rancho was defined as being next to the San Jose Mission land, which would extend the Moraga Rancho further into Alameda County than it now does. Also the Community of Redwood area was an extension of the social and cultural sphere of Moraga.

Because of this the Moraga Historical Society requests that all artifacts found in the Redwood area be preserved and if necessary moved to a safer place. If Archeo-Tec removed any artifacts during their search of the area we would like to know where they will be stored, and to have the opportunity to photograph them.

23

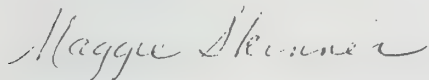
TOWN OF MORAGA
5/4/88
#16
NONSEAT

We would also like to preserve in our Archives the original Paleontology report prepared for EBMUD by Archeo-Tec. We would appreciate a copy of this report for our files.

I am enclosing a letter from Brother Dennis Goodman, a Christian Brother-Historian from St. Mary's College. He has lived in Moraga for many years and has hiked the Redwood area discovering several of the Indian artifacts.

Thank you for your co-operation.

Sincerely,



Maggie Skinner, Archivist

Enc.

CC: Town Council, Town of Moraga
State Assemblyman, Bill Baker
County Supervisor, Nancy Fahden
EBMUD Board of Directors:
Sanford Skaggs
Walter R. McLean
Helen Burke
Jack Hill
Kenneth Kofman
Kenneth H. Simmons
Mary Warren

April 5, 1968

E. B. M. U. D.
Adeline Street
Oakland, Ca

Gentlemen:

We, as members of the Moraga Historical Society, have had an interest in the area south of Moraga for many years and for several reasons:

When Moraga received the grant of his Rancho from the government of Mexico, its southern boundary was designated as the "Establecimiento de San Jose," which the U. S. Land Commission interpreted as land belonging to MISSION San Jose. In turn, when Guillermo Castro received his San Lorenzo Rancho (Castro Valley, etc.) his NORTHERN boundary was designated by the same property. There was, therefore, an indefinitely bound island of land that could "more or less" be a part of either the Castro or the Moraga Ranchos, provided they took some of their respective acreage from that Mission land and not from that within other purposely vaguely defined boundaries.

In other words, part of Moraga's (and Bernal's) 13,000 acres could have extended further into Alameda County than it now does.

When the Missions were suppressed, land that they had not already given to the Rancheros (Father Gonzalez y Rubio, Sept. 1, 1835) became PUBLIC LAND--as did the land not incorporated into the final boundaries of the acreage granted in the Mexican deeds. So, it was, that the "Island" between the two aforementioned ranchos became public land and available to squatters, most of whom took up quarter-sections of this island generally called--after the creek coming from the Middle Redwood Forest--simply "Redwood."

The Public School District was named "Redwood," as was the school itself. The Catholic church, St. Isabelle's, was listed in the 1878 edition of the NATIONAL CATHOLIC DIRECTORY as located in "Redwood, California."

The Historical Society has considered Redwood (community) as an extension of the social and cultural sphere of Moraga itself. Children who later went to Willow Spring School in Moraga had gone to Redwood Elementary. Moraga families went to church there rather than to Orinda Park. For example, two the Nunes boys of the Moraga Adobe, 1905-1920, were baptized there. Mrs. Lucas, mother of 12 prosperous offspring today, had the Cardinal of Lisbon dedicate her statue of St. Isabelle of Portugal in St. Mary's College Chapel (after the Redwood Church was closed by the People's Water Co.).

A lodge or grange meeting hall north of the community center was called variously "Moraga Hall," (according to Chester Madsen whose family came to Moraga in the 1879's), or "Redwood Hall," as we see by a roster of attendees belonging to a women's society.

In 1912, according to a real estate promotional blurb for a subdivision called "Redwood Terrace," the installation of a railroad line through Moraga was "Benefit commuters and shippers from Redwood. Moraga wasn't that far away in the minds of Redwoodians."

When one farmer in Kaiser Creek canyon murdered another, Contra Costa Gazette headlined the news as "Murder in Moraga."

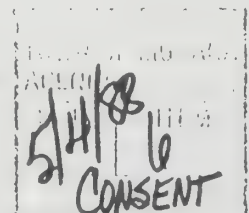
From all these examples you can see that Redwood Community was indeed within the sphere of Moraga.

We feel, therefore, responsible for the historical treatment of Redwood's past and for all sources that would help us to document this effort. We believe, too, that we are in a position to demand that all documentary sources, real or written, be preserved, and made accessible to us and to the public.

With this in mind we insist that real records, such as the bed rock mortars on the north side of Kaiser Creek bay, as well as the ochre pictographs on a nearby stone be undercut with a substantial substratum of stone and moved to a publicly accessible site on your property. May we suggest the Valle Vista Trail registration, staging and parking lot.

Sincerely yours,

Brother L. Dennis, Researcher,
Moraga Historical Society



4/6/88

The Moraga City Council.

Subject: Buckhorn Reservoir

As far as Buckhorn reservoir is concerned, I don't recognize arbitrary boundary lines. Buckhorn adversely affects Lafayette, Moraga and Orinda.

- 1 The reservoir at its largest proposed size will have a water line as close as $\frac{1}{2}$ mile from Moraga's border. That is close. Reservoirs and water seem to attract a lot of people for recreation. Thus it will generate a need for a lot of vehicular traffic in our area, which we don't.
- 2 For 2 years, during the construction period of the 6 foot diameter water mains that will feed Mokelumne river water to the reservoir, there will be a minimum of 50 large trucks every day, tearing up the roads of Lamorinda, with its concomitant noise and dust.
- 3 Of the 3 alternatives Buckhorn, Los Vaqueros and Pinal Reservoirs, EBMUD staff has indicated a preference for Buckhorn. Why? Because it is at a sufficiently high elevation that it can feed water by gravity flow to the potentially high growth areas of San Ramon, and the Danville-Tassajara areas.
- 4 Much has been said of the necessity of increasing water storage, in case of aqueducts failure. According to EBMUD estimates, the repair of the aqueducts would

take up to seventeen months to repair. The present terminal reservoirs can supply between 6 and 12 months, even with Buckhorn, pumping Delta water will be essential. So, why Buckhorn?

5. What's wrong with Delta water when millions of Southern Californians drink it all their lives?

6. What about the so-called shortage of water?

EBMUD has water rights to 325 m.g.d. from the Mokelumne River. 1986 consumption was 216 m.g.d. leaving a surplus of 111 m.g.d.

Question: Why has not EBMUD in anticipation of a 2 year drought filled up the reservoirs, with this surplus water all winter long?

EBMUD.
If we are so short of water, how come we sell large amounts of water to Contra Costa Water District and Brentwood?

I Marin County voters have turned down bond measures to increase their water supply, thereby controlling growth.

During the 1977 drought, EBMUD rationed water to its customers causing hardship - whilst at the same time it supplied Marin County residents with water by means of a large pipe laid across the Richmond-San Rafael bridge. Who is smarter?

8. It is unconscionable to destroy an environmentally sensitive and beautiful area to promote growth, when the roads cannot support that growth.

I think everyone is aware that the Baldicott Tunnel, Hwy 24 and I-680 is approaching gridlock.

9 E.B.M.U.D. is avoiding the implications of growth promotion by ever expanding facilities. It keeps annexing areas outside its boundaries to provide water, because it has water to spare. Without being able to hook up to water, more and more housing subdivisions, would not be possible.

10 A matter of growth? The population of Contra Costa County has gone from 100,050 in 1946 to 743,000 in 1986 to projected 1,011,000 in the year 2000.

The problems brought about by this unprecedented growth has adversely affected the quality of life of all its citizens, including developers.

We have become the Los Angeles of the North with polluted air, traffic that don't move, parking is impossible, and wall to wall people. Don't we deserve better?

11 E.B.M.U.D. is a non-profit public agency created by the legislature. A non-profit agency does not imply a reckless expenditure of public funds to be recouped through the rate structure.

Seniors and others have noticed the tremendous increase in rates in the last few years. Do we need more?

Can the E.B.M.U.D. legally force the present ratepayers - its customers - to pay for a reservoir that is not essential to serve its present customers?

We are at the crossroads. Enough is enough. We should all come to our senses before it is too late.

Al Silbert

9-15

Mr. Craig Crossley

I am writing to express my views on the proposed "Buckhorn Reservoir" due to come to our area.

I feel that our wildlife has suffered enough due to loss of habitat without their last wilderness area being disrupted.

(22) I hope you look deeply into this and try to save our remaining wilderness.

E. B. M. U. D. has picked a great time to pop this one on the public because of the recent lack of rain and the usual earthquake fears.

I would be interested in finding out your views on this.

Sincerely,

Darlene Lyons

Box 14 - Canyon, Ca. 94516

TOWN OF MORAGA AGENDA	
DATE 9/30	ITEM 17
CONSENT	



SAN FRANCISCO BAY CHAPTER • SIERRA CLUB

ALAMEDA • CONTRA COSTA • MARIN • SAN FRANCISCO 6014 COLLEGE AVENUE, OAKLAND, CA 94618
BOOKSTORE: (415) 658-7470 OFFICE: (415) 653-6127 CONSERVATION: (415) 653-6127

September 4, 1987

Mayor Crossley
Moraga City Hall
Box 188
350 Rheem Blvd., Suite 2
Moraga, CA 94556

Dear Mayor Crossley:

You may have seen recent stories about an EBMUD staff proposal to build a new terminal reservoir --Buckhorn-- by flooding the Buckhorn and Kaiser Canyons. These canyons, which connect to Las Trampas Regional Park and the city of Moraga constitute some of the most beautiful open space remaining to the East Bay.

EBMUD asserts that it needs this reservoir to provide "emergency storage" capacity. At \$110,000,000, this reservoir is an expensive insurance policy against multi-year drought and earthquake. In fact, adequate security can be achieved without the cost and damage of additional terminal reservoirs. If necessary, the water could be developed by a concerted program combining water conservation and reclamation, rate structure reform, and/or drought purchase of additional water from farmers downstream of EBMUD's Mokelumne facility. Ultimately, in the unlikely event of a true water emergency, the Delta, which already serves twelve million Californians, stands ready to take up the slack. (10)

The proposed Buckhorn Reservoir would by itself double EBMUD's terminal storage. We submit that this will have the effect of subsidizing new growth and congestion in the San Ramon Valley and elsewhere. The funds which EBMUD currently assesses from new construction are utterly inadequate to provide for this or any of the other capital construction projects which EBMUD has in mind. That means that existing customers, your constituents, will end up footing most of the bill without receiving any significant benefits. (28)

TOWN OF MORAGA AGENDA	
DATE 9/30	ITEM 16
CONSENT	

We urge your Council to oppose Buckhorn and to adopt the enclosed resolution. If you feel that you cannot take this step, we request that you not endorse any project until it can be publicly discussed and more information presented. If you have any questions, please contact any of us. We or members of our organizations would be delighted to present our viewpoint to you. Please send a record of any action taken in this matter to David Fullerton at the above address and to Sanford Skaggs, EBMUD Board President.

Sincerely,



David Fullerton
540-5226
Chair,
Sierra Club Bay Chapter Water Comm.



Robert Walker
626-1386
President,
East Bay Trails Council



Laura Selfridge
620-6527
Director,
Buckhorn Canyon Preservation Council



Seth Adams
549-2821
Director,
Cal. Water Policy Group

Enclosures

BE IT RESOLVED by the Council of the City of ----- as follows:

WHEREAS, EBMUD is currently considering a Water Supply Management Program that would include development of one or more new terminal storage reservoirs; and

WHEREAS, the water which new terminal reservoirs would provide could be replaced at a lower cost through programs combining water conservation, reclamation, rate structure reform and/or purchase of drought water rights; and

WHEREAS, the enormous cost of new terminal reservoirs would be borne primarily by existing EBMUD customers via higher water bills while the reservoirs would primarily benefit new growth areas; and

WHEREAS, Buckhorn Reservoir would flood a spectacular valley visible from Rocky Ridge and adjacent to Las Trampas Regional Wilderness, deprive the public of valuable open space and reduce recreational use of public land; and

WHEREAS, other sites exist which would have environmental impacts less deleterious than the Buckhorn site;

NOW, THEREFORE, Be it Resolved that the Council of the City of ----- urges EBMUD to fully explore conservation, reclamation, rate reform, and purchase of drought water rights as alternatives to new terminal reservoirs before giving further consideration to new reservoirs; and

RESOLVED, FURTHER, that this city opposes any further consideration of Buckhorn Reservoir.



THE TRIBUNE

An independent newspaper
serving the Greater Bay
Area from Oakland
since 1874

ROBERT C. MAYNARD
Editor and President

JOSEPH J. HARABURDA
Vice President/General Manager

PAUL R. GREENBERG
Vice President

LEROY F. AARONS
Executive Editor

ROY GRIMM
Managing Editor

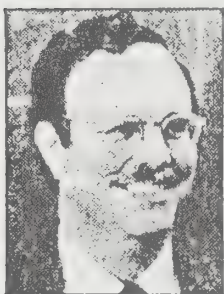
JONATHAN MARSHALL
Editorial Page Editor

FRED O. WETTON
Vice President/Advertising and Business Development

B-6 Tuesday, May 12, 1987

Oakland, California

Taking a stand at Buckhorn Canyon



**John
Calderwood**

I first saw the Buckhorn Canyon some 32 years ago, on March 5, 1955, when I was 10 years old. A friend and I were hiking from Moraga southeast to Rocky Ridge. I remember, as clearly as if it were yesterday, my awe at seeing that vast, grand, open country for the first time. It was, for a child growing up in suburban Orinda, like discovering a new world. I will always cherish what I found there: the sense of freedom, of space, of wildness; of dark green forests,

grassy hills, rushing creeks, soaring heights; of Rocky Ridge towering over it all, looming up like some enchanted Gothic castle in a Tolkien fantasy.

Of course, we were trespassing. A lot of kids in Orinda and Moraga did then. How could any boy with any spirit or imagination resist the call of those hills? I had many a confrontation with the local ranchers during those years of exploration. Ten-year-olds can get away with such things. But I kept on exploring, and I came to love the canyon of the Buckhorn. It was — and is — a very special place to me, and to others who know it as I do.

Some 15 years later, in August 1970, EBMUD issued its publication, "Land Use Master Plan." I still have a copy in my library. I attended the public meeting and I pored over the maps. I rejoiced that, in a rapidly urbanizing Contra Costa, the Rocky Ridge country would stay as it was when I was 10. It would be locked away from the developers and their bulldozers and cement mixers and dust and greed. The Rocky Ridge country would be safe. EBMUD assured us all, or so it seemed, that it would stay wilderness as long as EBMUD owned the land.

But that was 17 years ago. The high-tech revolution, the emergence of Silicon Valley and its tentacle, the 680 corridor, was not yet in sight.

Does anybody at EBMUD still have that master plan? Does it carry any weight at all with anybody important? Is anybody trying to implement it? Or, in the ahistorical mindlessness of California, is the plan now as forgotten as the times in which it was written?

On Aug. 10, 1974, the southern section of EBMUD lands was opened to hikers. I was at the dedication ceremony, on that hot morning at the Chabot staging area, the day after Nixon resigned. At last, I could hike in that magnificent country legally! I got a trail leader permit right away. For the past 12 years, I have been leading two hikes a year over the Rocky Ridge Trail.

I wonder: have any of the planners at EBMUD seen that country in the spring, when the velvety green hills are bursting with wildflowers? When, at twilight, the mournful bleat of a cow echoes up and down the ridges and canyons? Or how about in the

fall, when the tawny, coppery hills are splashed with bright red splotches of poison oak, and the sharp, clean fragrance of the bay laurel fills the air after an autumn rain?

Now, somebody is planning to build a dam and create a huge reservoir, flooding Buckhorn Canyon well to the north of the EBMUD boundary. The incomparably lovely Kaiser Creek Canyon to the east, which should have been opened to hikers long ago, also will be flooded. Everything below the 680-foot contour will be drowned. Callahan Ridge, the "bench" at the foot of Rocky Ridge, will become a peninsula; area wildlife will be drastically affected; the dark green forests will be bulldozed, and ugly bathtub rings around the reservoir will scar the land when the water level is down, as it is most of the time on neighboring Upper San Leandro Reservoir.

Has anybody given any thought to the Rocky Ridge Trail? Will EBMUD re-route it to the north, through the present Carr Ranch, hooking it into the existing dirt road at what will be the northeast head of the new reservoir? Will any new trails ever be built? How can they be, when the Buckhorn and Kaiser canyons, which is where they should go logically, will be under water?

And all of this is for the San Ramon Valley, the 680 corridor. Then, we'll have more water for all those sinister, Darth Vaderesque glass and steel boxes, like the ones now looming over Concord and Walnut Creek.

I grew up in Contra Costa County in the 1950s. I remember what a beautiful place it was then, and I refuse to believe that I am only clinging nostalgically to the past. People like me have to take a stand, somewhere, against the Los Angelization of this planet. We cannot just keep running, to Oregon, to Colorado, to Alaska; if we do not draw a line someplace against the developers, those places someday will be Los Angelized too.

I choose to draw my line, to take my stand, among those hills that I came to love as a child 30 years ago. Thanks to EBMUD's thus far wise and benevolent stewardship, those hills, up to this point, have remained pretty much as they were 30 years ago — one of the few corners of Contra Costa about which such can be said. I take my stand at the proposed site of Buckhorn Reservoir.

I protest, in the strongest possible terms, against the construction of such a reservoir. EBMUD could save water; they could try conservation. They could tell the developers that they have indulged their greed in our hills and valleys long enough. They could tell them to go to Southern California, or Texas, or some other place where growth is still seen as an unmixed blessing. If EBMUD must build their reservoir, they could build it in the hills around Pinole, or enlarge Lake Chabot. But, whatever they do, they should leave the Rocky Ridge country alone.

John Calderwood teaches history at Bishop O'Dowd High School and Chabot College.

BUCKHORN RESERVOIR: QUESTIONS AND ANSWERS

The left column below represents a set of questions and answers on Buckhorn Reservoir sent to the Sierra Club Bay Chapter by the East Bay Municipal Utility District (EBMUD). The right column is a Sierra Club response written by David Fullerton, Chairman of the Bay Chapter Water Committee.

EBMUD

1. Q. Why do you need the Buckhorn Reservoir?

EBMUD. The Buckhorn Reservoir is needed to provide an emergency local source of water for EBMUD customers should disabling damage occur to EBMUD's aqueducts and other major transport facilities. It would also store water to be available during drought conditions and to meet peak water demands occurring during hot summer months.

2. Q. Isn't such damage to aqueducts unlikely?

EBMUD. No. Levee breaks and island flooding occur almost every year in the Delta. In 1980, the Jones Tract flood undermined but, fortunately, did not collapse our aqueducts. Strong earthquakes are a less predictable but nevertheless constant threat.

3. Q. Aren't there enough reservoirs already to provide for these situations?

EBMUD. Existing reservoirs store a minimum of four months supply and maximum of 6 months supply even with emergency rationing. Aqueduct damage from a severe earthquake or flood in the Delta could require 17 months to repair. Additionally, rationing was required during the 1976-77 drought because of insufficient water storage capacity in existing reservoirs.

SIERRA CLUB BAY CHAPTER

1-2. Response. The real question is whether drought and earthquake protection and yes, some growth can be provided for in an environmentally sensitive manner without enormous costs to the ratepayers. The Buckhorn Reservoir would provide both some measure of security against shortages and a large amount of water for growth -- as much as 30 million gallons per day (mgd) or more depending on water management policies. But it would not do so without tremendous costs -- both environmental and economic (estimates are already at \$110,000,000). In point of fact, Buckhorn Reservoir is unnecessary. The needs it would address could be satisfied in other ways without the expense and without the damage to the environment that Buckhorn would entail.

3. Response. The answer given is inaccurate. Total storage in terminal reservoirs represents well over six months of use within the District at normal usage levels. Obviously, in an emergency situation, this supply could be stretched much farther. EBMUD's own Urban Water Management Plan states that, "In the event of a failure of raw water facilities from the Mokelumne, the terminal reservoirs could provide water to District customers for 6 to 12 months." (IV-10). Water storage in the terminal reservoirs typically drops somewhat during the summer months, but it need not. EBMUD could keep terminal reservoir storage at peak values year round but chooses not to do so for reasons of economy. EBMUD's willingness to see its "emergency reserve" drop summer after summer speaks volumes about its true level of concern for aqueduct damage.

4. Q. Couldn't EBMUD just pump water out of the Delta in the case of aqueduct outage?

EBMUD. Yes, but we would be drinking water polluted by agricultural drainage, industrial wastes and urban runoff. It took five years to return terminal reservoirs to normal quality after only three months of using Delta water in 1977. Further complication the use of Delta sources is the fact that in a major flood or earthquake, salt water would intrude into the Delta and water treatment plants can't remove salt from water.

5. Q. Is Buckhorn the only alternative?

EBMUD. No. We're also looking at a Pinole Reservoir and at other sites. However, Pinole would be smaller than Buckhorn. It's also at a lower elevation which makes it less usable Districtwide.

6. Q. How big would Buckhorn Reservoir be?

EBMUD. We are studying different dam alignments. At the present time, it appears the most feasible dam would hold a volume of 80,000 to 140,000 acre feet of water. The dam height would be approximately 350 feet and would be constructed of earth excavated from the reservoir basin.

4. Response. This is the ultimate irony. In the worst case analysis, we might be "forced" drink the same water that over twelve million Californians already consume. Clearly Delta water is of lesser quality than Mokelumne water. But we are talking about an event that might take place less often than once in a lifetime. Compare the occasional inconvenience with the cost and environmental impact of Buckhorn Reservoir. In any case, EBMUD overstates the problems of using Delta water. In 1977 EBMUD dumped raw Delta water into its terminal reservoirs with some loss of water quality. But why not contract with the Contra Costa Water District (CCWD) to treat Delta water before distribution to the EBMUD system? CCWD deals with Delta water every day and could supply Delta water to EBMUD of high quality for that once in a lifetime need. EBMUD already intends to sell as much as 50,000 acre-feet to CCWD per year out of its normally vast surplus -- why not let water flow both ways?

5-6. Response. In January of this year, EBMUD thought that a Buckhorn Reservoir of some 55,000 acre-feet would be large enough to supply its needs. Now we find that EBMUD needs as much as 140,000 acre-feet, a volume equal to the entire current storage capacity, to be satisfied (one suspects that EBMUD expanded the size when they realized that the vaunted American River supply would be useless in drought). High Pinole, at 45,000 acre-feet would be almost equal in volume to the original Buckhorn and, according to EBMUD's own studies, much cheaper as well. High Pinole also lies next to urban development, rather than in the center of one of the most beautiful wildernesses in the entire Bay Area.

Q. Isn't EBMUD just trying to plan for growth?

EBMUD. EBMUD isn't a planning agency, nor do we promote growth. We are required by law to serve all customers within our service boundary. Buckhorn is specifically intended to be used in dry years during summer demand peaks or if the aqueducts go dry, not to support added growth.

Q. But doesn't the availability of additional storage encourage developers to build?

EBMUD. Developers will continue to build as long as local government allows them to, whether we have more water available or not. The fact that adequate water facilities were not built did not stop growth in West Contra Costa County, Castro Valley or the San Ramon Valley in the early 1980's. Communities there knew we were legally required to serve them whether we had reservoirs or pipelines already existed or not.

Q. Aren't there significant environmental impacts?

EBMUD. We are presently preparing a Draft Environmental Impact Report (DEIR) to answer this question. We do know that a pure strain of Rainbow Trout, known as *Salmo Irideus*, is indigenous to Kaiser Creek but plans for the strain's preservation are already underway. The dam itself is situated in one of the narrowest gorges of the Upper San Leandro Reservoir. It will be well below the height of surrounding ridges and virtually invisible except by direct overlook.

7-8. Response. Several claims are made here which deserve rebuttal. The claim that Buckhorn is not intended to support new growth is disingenuous. Buckhorn Reservoir's storage would effectively supply the water for 100,000 people or more. Buckhorn Reservoir would be able to supply water during a drought and new growth would be permitted based upon this guarantee of water supply. It must be emphasized that Buckhorn is not needed to give current customers drought protection -- they could sustain a severe drought quite handily. Thus, Buckhorn Reservoir will primarily benefit new growth. But who will pay for Buckhorn? By the year 1992 EBMUD expects to have put away \$2.9 million total in developer fees toward water development projects. But the interest alone on the bonds needed to finance Buckhorn will come to almost \$10 million per year. Existing customers will thus be forced to subsidize the very growth which is daily detracting from the quality of life here. EBMUD promotes growth.

EBMUD is not a planning agency, true enough. But at the same time it is obvious that EBMUD decisions have a tremendous impact on growth rates and locations. EBMUD may be required to service all reasonable demand within the District (whatever "reasonable demand" is), but it is certainly not required to spur growth by obtaining water supply far in excess of current needs nor to supply water outside the District as it promised to do in the Tassajara Valley recently. Finally, if EBMUD has no effect on growth, one must ask why development interests have financed the campaigns of so many EBMUD Boardmembers.

9. Response. The Grand Canyon is virtually invisible except by direct overlook-- should we put a few dams in there? The Buckhorn and Kaiser Creek Canyons are truly magnificent -- whether from above or from within. This 350 foot high dam would destroy both valleys and drown or displace all life therein.

10. Q. The Sierra Club as stated that the reservoir would sever the Rocky Ridge Trail, the Buckhorn Canyon Trail, the lower portion of the Kaiser Creek Trail, as well as the lower portion of the Callahan Ridge Trail, Is this true?

EBMUD. Approximately one-half mile of the Rocky Ridge Trail would need to be rerouted around one finger of the reservoir. However, the other trails cited by the Sierra Club as conflicting with the Buckhorn Reservoir site are only proposed trails suggested in a 1973 Environmental Impact Report. These trails do not exist.

11. Q. Why did the District acquire the Buckhorn site?

EBMUD. The site was purchased to protect watershed land or to build a reservoir. The District does not purchase or hold land strictly for open-space purposes. Any land purchased by the District must benefit the functions of the District which are to provide water and wastewater services.

12. Q. Where will the water come from to fill the reservoir?

EBMUD. EBMUD has water rights to 325 million gallons a day (MGD) from the Mokelumne River. EBMUD's consumption last year was approximately 216 MGD. During wet years, the surplus water available from the Mokelumne River would be transported through the Mokelumne aqueducts to the Buckhorn Reservoir.

13. Q. If we build the Buckhorn Reservoir, why would you need a supplemental supply of water from the American River?

EBMUD. Buckhorn and the American River supply are solutions to different problems. American River water is the long-term answer to growing demand for water in all parts of the District. The purpose of Buckhorn Reservoir is to store water for use during drought periods, to reduce peak level demands during summer months and provide a local water supply during emergency outage. In addition, Buckhorn will provide storage for American River water, enabling the District to meet its commitment to take water only when there will be no significant effect on the environment and recreation in that river.

10. Response. The rerouting of trails is a side issue and always has been. If the canyons are destroyed, the trails will become a moot point.

11. Response. EBMUD cannot simply declare that this reservoir benefits the functions of the District and then proceed unilaterally, in the face of adverse financial and environmental repercussions. The California Environmental Quality Act (which mandates the Environmental Impact Report) was passed to protect the public and the environment from just this sort of tunnel vision.

12-13. Response. EBMUD is correct that Buckhorn could be filled with Mokelumne water. In 19 out of 20 years, EBMUD uses less than 2/3 of the water available from the Mokelumne river, leaving a surplus of over 100,000 acre-feet of water. Thus, the Mokelumne can replenish the terminal reservoirs even after a bad drought.

That being the case, the American River supply is almost useless whether or not Buckhorn is built. The American River supply 1) would be just as vulnerable to earthquake disruption and 2) would be unavailable in drought due to drought pumping restrictions to which EBMUD has agreed. Almost every drop of the American River supply would in fact be sold to outside agencies such as the Contra Costa Water District. The EBMUD ratepayer would foot the bill, of course.

Q. Will there be recreational activities at Buckhorn?

EBMUD. The District is studying that possibility. The Buckhorn Reservoir site is remote from public access and any recreational activities are expected to be limited to activities such as hiking.

Q. Isn't it true that if we conserved better, we wouldn't need an additional water supply and more reservoirs?

EBMUD. No. At best, conservation can delay the day when a new supply is needed to meet routine day-to-day demand. No amount of conservation could stretch the District's current supply to cover the 17 months needed to repair an aqueduct in the event of an outage, no forestall harsh rationing in the event of another two-year drought. However, the Buckhorn Reservoir could supply storage for use during an extended outage. The length of time the Buckhorn Reservoir could provide emergency service depends upon the amount of its supply, which in turn will depend on the final size of the reservoir.

14. Response. This is to say that recreational opportunities will be the same as now -- except that some of the most beautiful country will be under water.

15. Response. The question is whether we should invest hundreds of millions of dollars in the vain attempt to avoid inconvenience once every few decades or even centuries. Remember, the 1976-77 drought may be a one in five hundred year occurrence and that EBMUD has access to 100 mgd beyond current use in nineteen years out of twenty. As for earthquake damage, the consequences of the failure of Buckhorn Dam must be considered along with the failure of the aqueducts. Another thing EBMUD is careful to deemphasize is that in a seventeen month outage, we would probably be drinking Delta water with or without Buckhorn, the dilution factor would just be somewhat different.

As for alternatives to terminal reservoirs, conservation is not the only arrow in our quiver, though even here EBMUD consistently underestimates the possible conservation savings. Water reclamation (e.g. watering golf courses with reclaimed water) can save millions of gallons per day as could an improved rate structure.

Direct water purchase during drought from farmers who use Mokelumne water (the Woodbridge Irrigation District) is also a possibility. EBMUD Boardmember Kofman recently asked Mr. Way, EBMUD's Chief Engineer about this rather obvious solution to drought planning. Mr. Way had to admit that he had never even broached the subject with the Woodbridge District. This answer typifies EBMUD's almost complete lack of interest in seeking non-structural solutions to its problems.

Creative solutions to our water problems can put off for decades or forever the day when we need to finance expensive and destructive water projects. I submit that the benefit will repay the effort.

BEFORE THE TOWN COUNCIL OF THE TOWN OF MORAGA

In the matter of:

Town of Moraga's position on } RESOLUTION _____
proposed Buckhorn Reservoir }

WHEREAS, East Bay Municipal Utilities District is currently considering a Water Supply Management Program that would include development of one or more new terminal reservoirs; and

WHEREAS, the water which new terminal reservoirs would provide could be replaced at lower cost through programs combining water conservation, reclamation, rate structure reform and/or purchase of drought water rights; and

WHEREAS, the enormous cost of new terminal reservoirs would be borne primarily by existing East Bay Mud customers via higher water bills while the reservoirs would primarily benefit new growth areas; and

WHEREAS, Buckhorn Reservoir would flood a spectacular valley visible from Rocky Ridge and adjacent to Las Trampas Regional Wilderness, deprive the public of valuable open space, destroy habitats of wildlife including rare and endangered species and destroy historical indian sites and early settlements; and

WHEREAS, creation of the reservoir would stimulate undesirable development growth on the lands surrounding East Bay Muds watersheds, thus exaggerating the congestion, traffic and populations within the Lamorinda area; and

WHEREAS, other sites exist which would have environmental impacts less deleterious than the Buckhorn site;

NOW THEREFORE BE IT RESOLVED that the town council of the Town of Moraga urges East Bay Municipal Utilities District to fully explore conservation, reclamation, rate reform, and purchase of drought water rights as alternatives to new terminal reservoirs before giving further consideration to new reservoirs; and

BE IT FURTHER RESOLVED that the Town of Moraga opposes any further consideration of Buckhorn Reservoir.

AYES:

NOES:

ABSTAIN:

ABSENT:

ATTEST:

TOWN CLERK

MAYOR

BEFORE THE TOWN COUNCIL OF THE TOWN OF MORAGA

In the matter of:

Creation of a sphere of influence } RESOLUTION_____
in the Buckhorn Canyon area }

WHEREAS, The Buckhorn Canyon has been preserved by Contra Costa County for a lengthy period of time as a result of county resolution; and

WHEREAS, The Buckhorn Canyon area supports a large population of plant and animal wildlife, including rare and endangered species; and

WHEREAS, The buckhorn Canyon area is the last remaining wildlife preserve of substantial size within Contra Costa county; and

WHEREAS, The County of Contra Costa is in the process of updating its general plan which, as it now stands in draft form, may have significant impact on the Buckhorn Canyon wilderness; and

WHEREAS, East Bay Municipal Utilities District is proposing the construction of a large reservoir and flooding out the basin of the Canyon, thereby destroying the habitats for numerous wildlife species; and

WHEREAS, The East Bay Municipal Utility District has not made clear its intentions with regard to public access and use of the property should the reservoir be constructed; and

WHEREAS, The creation of such a facility could have serious impacts on Moraga, Orinda and Lafayette, both during and after the construction phases, particularly with respect to housing and population issues which might impair the semi-rural environments of these communities;

NOW THEREFORE BE IT RESOLVED by the town council of the Town of Moraga that the town desires sphere of influence status over the Buckhorn Canyon region as described on the attached map which is made a part of this resolution and hereby approves such action.

NOW THEREFORE BE IT FURTHER RESOLVED that this resolution be forwarded to the Contra Costa county board of supervisors and Lafco for their respective approvals.

ADOPTED by the town council of the Town of Moraga on March 16, 1988 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

ATTEST:

TOWN CLERK

MAYOR

TOWN OF MORAGA	
AGENDA	
DATE	ITEM
3/16/88	IV. D.
SPECIAL ORDERS	

438 Stonefield Place
Moraga, CA. 94556
June 13, 1988

Mr. Sanford Skaggs,
EBMUD Board President
2130 Adeline St.,
Oakland, CA. 94623

RECEIVED

JUN 15 1988

Dear Mr. Skaggs:

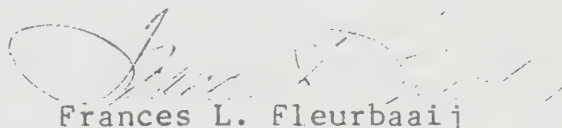
OFFICE OF PLANNING

As a resident of Moraga for the past twenty-one years, I am appalled to learn that EBMUD is considering building another huge reservoir in our backyard.

A recent report given by Tom Buckingham, quoting U.C. seismic experts, indicates that in the last ten years, earthquakes of a magnitude of greater than 2.5 have rocked this area twenty-one times! Can you really feel confident that you understand the geological configuration of these hills well enough to guarantee that in the event of a major earthquake, a manmade dam can withstand such awesome power? As one in the path of the flood, I don't!

Lastly, since EBMUD intends to fill this monster by pumping in American River water, it would be more logical, not to mention cost effective, to pump directly to the user source - the San Ramon Valley. That is where a reservoir is needed, not here in Moraga. We already have a reservoir in our backyard, and we do not want another one.

Yours very truly,



Frances L. Fleurbaaij

CC: Richard Kolm,
Assistant Chief Engineer
for Planning,
2127 Adeline,
Oakland, CA. 94623

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RECEIVED

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JUN 15 1983

OFFICE OF PLANNING

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There is no way that you can convince us that construction of the modern Reservoir will not cause major disruption to Casino and its neighboring streets. It is not all of Nevada.

16

In addition to all of this, there are two schools on Camino Pablo which would suffer great inconvenience in the increased large truck traffic on Camino Pablo. These students include elementary school-age children who have not yet developed the skill needed to judge correctly the proximity of trucks travelling at a moderate to high speed. My wife has witnessed trucks going by and then suddenly coming to a halt, completely blocking the way. In excess of the posted speed limit. I doubt that you can guarantee that trucks would follow the speed limits when a deadline is to be met. In addition to this, the increased noise and vibrations from these trucks would be a major problem for the elementary school children. The development of their hearing and breathing apparatus for the elementary school children. The children would be just about ready to enter that elementary school when construction is projected to start. We will not tolerate such a latent threat to her safety.

As an aside, new sewers were laid beneath our street for the new development in Las Vegas. The traffic was stopped for a few months. Contrary to what was said, the work started early in the morning. My wife's office was in the area and the factory noise was quite enough. At a sample of what we might expect from the project, the noise level was quite enough. We want a better sample.

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San Diego
Sandra Andersen-Tancin

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EAST BAY MUNICIPAL UTILITY DISTRICT

a memo from ken kofman
director, ward 5

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district headquarters
2130 adeline st., oakland ca 94623
(415) 835-3000

Mr. Richard Kolm
Assistant Chief Engineer for Planning
East Bay Municipal Utility District
2130 Adeline Street
Oakland, CA 94623

June 12, 1988

RECEIVED

JUN 15 1988

OFFICE OF PLANNING

Dear Rich:

Attached are my comments regarding the draft EIR and draft technical report on the district's proposed water supply management plan.

While I believe the initial draft clearly outlines the issues, I found the draft to be written in such a way as to lead the reader to the conclusion that Buckhorn is the only alternative. While I do not fault staff for clearly stating its position, I believe the EIR needs to be strengthened in numerous areas. In particular we need a section on cumulative impacts of stepped-up water reduction efforts. Comment needs to be made both regarding the supply side as well as removing elasticity in meeting future outages or drought. (25)

Also, most of the cost-benefit analysis has been confined to capital costs. What about long term operating costs under the various scenerios? (15)

And, as I mention in my critique, the possibility of water marketing is totally absent from the current document. (10)

Regarding aqueduct replacement, I believe it would be very beneficial to expand the discussion to a pipeline that skirts the Delta, goes near the Los Vaqueros site and connects with Buckhorn/Upper San Leandro; thus providing EBMUD with a loop system. (12)

My ten pages of comments are done in the same order as the page numbering in the two documents, so there is a mixture of policy issues along with suggested word changes. My computer (rather prophetically) starting giving out on me during this process, so I was unable to access and reformat into a more logical arrangement. Sorry about that.!

Might I suggest also that all existing policies and policy assumptions be assembled together so that a meaningful review can be made of them.

And finally, I believe the public might be slightly mislead by the term "technical report." It appears to be a more in-depth look at the issues and I urge it be incorporated directly into the EIR. (1)

Sincerely,

Ken
Ken Kofman

EAST BAY MUNICIPAL UTILITY DISTRICT

a memo from ken kofman
director, ward 5

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June 8, 1988

Comments on the Water Supply Management Program Draft EIR

Throughout the draft EIR, the word "district" should be modified to clearly indicate what is board policy rather than a staff recommendation. Such as the bottom paragraph on page 1-2 where it should be clearly noted that the district staff (and not the board) rejected the alternatives to the WSMP. (1)

Also throughout the report, the year 2020 is used. Is this considered "build.out" and if not, shouldn't there be a discussion of what is needed to provide adequate water for full build out?

The report assumes that heightened water conservation/reclamation will not produce needed savings? But no where does the report estimate the type of savings possible if the cost of a reservoir was instead used in other ways. For example, instead of spending \$152 million for Buckhorn; what does that \$152 million give us if we used it on reclamation; on water conservation; or to build a dual system to pipe Delta water for irrigation purposes only? (10)

The report also limits Delta security to building of a dual pipeline. Why not a pipe line that skirts the Delta? And why two pipelines rather than one? And Why no mention of the eventual replacement of #1? (12)

2-1: Program elements should be expanded to six -- what of water marketing. (10)

2-1: Terminal Storage. Sentence "The multiple have multiple purposes" makes no sense. (6)

2.9: Biological Resources, line 5. Isn't "a conceptual mitigation program" needed as part of this EIR, rather than later on? (27)

2-15: Public safety, line 7-10. "it could be argued" is too uncertain. What is the probability that a failure of Buckhorn could result in a failure to Upper San Leandro and Chabot dams? (21)

2-16: Third paragraph beginning with "The WSMP element." It would seem that providing for additional consumers as well as for drought also have environmental consequences. (19)

2-17: Potential for growth-inducement. This section is unclear as to how much additional mdg is needed? Also proposed conservation and reclamation measures only achieving 12 mdg appear to be understated. (24)

2-17: Why much additional supply/storage/conservation is necessary to reduce the level of rationing from 25% to 10% or Zero% What size reservoir is needed if rationing is kept at 39% and at 39% without any reduction in the first year of a two year drought. What is needed if we assume a three year drought? (3)

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3-1: Why is the supply availability figure stated as 252 rather than 325 mgd? (9)

3-4. Water shortage: What happens if the expanded water conservation and reuse program figures are used rather than the "current" program? (10)

3-6. Tale 3-1. Why is the conservation and water reclamation figures so much less than shown in our Urban Water Management Plan Table III-5? (10)

3-9: Why is Buckhorn proposed as a "standby system" Wouldn't it make more sense to use it as an operational reservoir and thus improve the water quality throughout the district? (1)

3-10, top line: What technical feasibility studies are still underway? (2)

3-10 Water conservation: As a result of recent drought-related action, the landscape guidelines should be taken out of this "proposed" section and placed in a "recently adopted" program category. (10)

3-11 District activities: explain how pressure reduction policies will "encourage" greater consumer conservation? (10)

3-12. Water reclamation: Add Alameda Golf Course to potential water reclamation projects. (10)

3-13: Water quality protection: Acquisition is not the only way to protect the watershed. Zoning, purchase of development rights etc. should be included. (3)

4-2 Alternates: No mention of a dual system to allow the use of Delta water for irrigation purposes, especially in the Walnut Creek area. (1)

4-5: Woodbridge exchange: Add Camanche pump-back as an additional alternative. (1)

4-5: Alternative terminal sites: Explain why existing reservoirs can not be expanded? (1)

4-6:.. Add water marketing as another alternative. (10)

5-4: Report refers to 1.5 acres of land "adjacent" to St. Mary's (top paragraph) as well as 1.5 acres of land "owned" by St. Mary's (bottom paragraph). Are these two parcels or the same parcel? (1)

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5-9: Pinole: Why can't the proposed Pinole reservoir hold Pardee water rather than San Pablo Reservoir Water?

30

5-11: Los Vaqueros: Last sentence is incorrect. CCWD does not "presently purchase" surplus water; rather it intends to do so once its EIR is done.

32

5-17: Why is Castro Road shown as the only route for the proposed aqueduct?

30

5-27, bottom paragraph: Please explain what are the present plans and policies of nearby cities as well as Contra Costa County regarding Pinole and Buckhorn sites.

19

5-28: Suggested mitigation: Are Buckhorn and/or Pinole proposed for water recreation uses and if not, why?

26

5-43: Seismicity: Please elaborate on the Antioch Fault zone.

7

5-52: Second paragraph beginning with "according." Please identify the "two area faults" mentioned.

21

5-79: Endangered species: Please identify which of the proposed reservoirs are impacted by table 5-4 and which are not.

31

5-111: Buckhorn site mitigation. Why shouldn't a temporary concrete plant be built on site?

27

5-142: Archaeological resources: Need for formal archaeological scrutiny would appear to be a prerequisite before a project can be determined, rather than just as a "mitigation" measure.

31

5-151 and 5-152: Buckhorn and Pinole: Are there any residences/business which would be subject to the noise of the pumping plants? Can the PG&E transmission lines be relocated on EBMUD property or on other public lands without putting them any closer to existing housing than now exists?

17

19

5-154: Dam-break wave progression Table 5-7: What about Los Vaquerez?

32

6-3 Aqueduct vulnerability: On what is the 13-month outage figure based? What is the time period to put the first pipe back into operation?

7

6-3: Since "the district has concluded that it must increase protection against extended outages" then why is EIR only calling for studies rather than actual work on pipe strengthening or rerouting?

7

6-3 Alternative measures: Shouldn't American River be added to the list?

14

6-5: Levee Maintenance: Please comment on the long-term likelihood of islands sinking and resulting impacts on EBMUD's three aqueducts.

7

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7-4 Current program: What are the draft landscaping guidelines currently being formulated for new commercial developments? And how do they differ from the EBMUD landscaping guidelines already in place? (10)

7-6 last full paragraph: Why is there no mention of encouraging the use of ground water as a supply-side activity? (10)

8-1 Water reclamation: Why no mention of the potential of irrigating landscaping along the reclamation project pipe path? (10)

9-3 Use of Delta water: Why is it necessary for Delta water to be put into terminals? (11)

10-1 Water supply and urban growth: the discussion and charts do not specifically show that water consumption will rise. Rather one needs to refer to the technical report for that data. The basic assumptions about per capita use which drives the 270 mgd figure should be added to the draft EIR. (4)

TECHNICAL REPORT

II-1: Water marketing should be added to list of security alternatives. (10)

II-2: What action is proposed if current local water supply tunnels are damaged by earthquakes? Will water from either of the three proposed reservoirs be available if these tunnels are disrupted? (6)

II-5: Should 120-day standby policy be altered. What happens if it goes to 180 days? To 90 days? (10)

II-5: If the "Delta is the most critical area because floods and earthquakes could cause severe water supply outages" why is terminal storage being urged to be done first? (7)

II-8 Aqueduct support structure: "The piles of Aqueduct No. 1's support are not able to resist even moderate earthquake forces" Please explain basis for this statement and indicate whether there have been any moderate earthquakes since the aqueduct was erected and what happened? (7)

II-8 Aqueduct support structure: "Both the elevated and buried portions . . . are susceptible to damage" What is the length of aqueduct which needs to be replaced to remove this threat? And why does the EIR focus only on the elevated portion and not the susceptible buried parts? (7)

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II-8 DWR's study: Has there by any follow up to the 1986 study, particularly that part which "did not determine if sufficient water supplies with adequate water quality would be available if an outage were to occur? If not, why not?" 7

II-13 Second paragraph: Technically the San Andreas Fault earthquake did not "devastate" San Francisco. The resultant fire did. Picky, picky! 21

II-15 Subsidence of Delta Levees: Can the levee system be maintained through the year 2020? Regardless, wouldn't the EIR consider the "worst case scenerio of a levee failure?" 7

II-19: Alternatives for Improving Security: Water conservation and water reclamation potential saving figures are understated. 10

II-20 Water conservation: The use of short-term water conservation through rationing in event of a disaster needs to be included in the policy decisions which the EBMUD board should determine. I presume "diaster" is not intended to include a drought situation. 10

II-20: EBMUD's Urban Water Managemetn Plan shoulds a greater amount of water savings through conservatioin/reclamation than is listed in this report. 10

II-21: Water reclamation: Please explain what level of water conservation/reclamation is needed to "be a viable alternative for security of the EBMUD water supply against extended outages"? 10

II-22: New pipeline across the Delta: Why two pipelines? What is the cost for a single pipeline around the Southern End of the Delta? What capacity would one pipeline have to be in order to provide enough water (at reduced consumption) until the cross-Delta aqueducts are repaired? 12

II-26 Interties with Other agencies: Do other utilities have a "short term" rather than a long term supply which could be used to augment EBMUD? 10

II-26 Groundwater Resources: Did the 1986 Todd report cover the entire EBMUD area? Was the report done at the behest of EBMUD? Did it discuss the potential of well water for irrigation purposes or individual homes and business parks? Please elaborate on the Todd report. 10

III-3 Water use: Please provide supporting data on the statement that "sixty-seven percent of all water use is inside use". 4

EAST BAY MUNICIPAL UTILITY DISTRICT

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III-12 Water Conservation measures: San Jose project is showing a 92 percent rate of use of water saving device kits with installation of 220,000 homes to be completed over a 3-4 year period. Why is EBMUD projections so much lower and the time period so much longer? (10)

III-13: Landscape Consultations: 50 consultations were conducted in 1987, with what result? (10)

III-14: Pressure reduction study: Why is irrigation system upgrades put into this section? It is incorrect to state that water savings from systerm upgrades are unknown (unless EIR is referring to pressure reduction study). (10)

III-15: EBMUD waterwater department activities: Can the 1 mgd tertiary process water plant be expanded and is there a nearby location where the water can be used (such as washing out the I/I storm drain basin)? (10)

III-17 Policy for water supply availability and deficiency: Assuming Camanche can be supplied with other than Pardee water (such as the Delta pumpback or American River water) what does that do to the firm yield figure and also to the standby storage in case of drought? (9)

III-17 Policy of customers voluntarily reducing their water use by 25 percent in the six months prior to the year of rationing needs to be represented to the board and probably deleted as an invalid assumption. (3)

III-19 Supply disruption: "the risk of a supply disruption is more critical than a drought." Then why isn't greater emphasis put on eliminating disruption potential? (7)

III-23 Existing terminal storage limitations: Third sentence should be modified to add "or consumer demand is significantly reduced." (10)

III-24 Figure III-25: Apparently some errors in this table. For instance it shows no populition for Alamo-Blackhawk in year 2000 and a decrease in Danville population from 32,100 to 17,500 by the year 2000. Also some cities shown a decline in population. (4)

III-25 Water demand projections: Population figures are just shown for year 2000. What is the pupulation figure for 2020? Why is it assumed that the new 98,000 homes would average approximately 387 gallons per day? If present average use is 400 gpd and increased water conservation is supposed to reduce that figure by 10 percent, the average use should be no more than 360 gpd. (4)

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III-26 Single family residential water use? Why, in every region, is use by new customers assumed to be higher than existing customers? Please provide data on which conclusions of water use was made. Calculate the water consumption on new homes assuming the landscape guidelines remain in effect after the drought. 4

III-29 Water Conservation base case: In both landscape consultations and landscape water use efficiency, it appears essential to know what estimated additional savings might be by year 2020 in order to know what impact this might have on the need and size of additional terminal storage. 10

III-30: Water saving device distribution: How often does program need to be redone in order to insure that toilet dams and low flow shower heads are still in use? Is there need for a more permanent type of toilet dam? 10

III-3: Additional water conservation program: If base case to achieve 7 mdg by year 2020 will cost \$264,000 per year; and alternative conservation program to achieve an additional 5.1 mdg will use be an additional \$296,000, it appears the additional water savings would be very cost-effective. 10

III-32: Landscape consultations: Policy question whether consultations should be an automatic part of a request for water service and/or a request to city/county for building permit. 10

III-34 Theoretical measures: Ultra-low flow toilets are now required by Monterey County? Why doesn't it make sense to require them on all new housing and on when bathrooms redone? 10

III-34 Key factors: "It is unreasonable to assume" is an editorial comment. Unless a poll has been done, or communities which have adopted expanded water conservation are surveyed, the statement should be clearly identified as a staff opinion. 10

EAST BAY MUNICIPAL UTILITY DISTRICT

a memo from ken kofman
director, ward 5

(415) 521-1819
1080 jost lane, alameda ca 94501

district headquarters
2130 adeline st., oakland ca 94623
(415) 835-3000

III-35 first full paragraph regarding maintaining a strong existing economy: This editorial comment should be rewritten. Undertaking significant rigorous water conservation measures to insure that there is an adequate supply for economic growth would appear to be a positive, rather than a negative, message.

III-36 Potential Reclamation Projects: Figures III-33 and written material should be expanded to include other areas which were the subject of the late 1970's report and in specific Alameda Golf Course and landscaped areas which are near existing and proposed reclamation projects.

III-37 San Ramon Valley: The reference to a dual water system needs to be expanded and the cost-benefits outlined.

III-37 TWA reclamation project: How does project's estimated cost compare on a per acre foot with the building of a new reservoir?

III-37 Water banking: scope of discussion should be expanded to include water marketing.

III-38: Please explain what commitments are reportedly being violated regarding the Mokelumne River flows?

III-39: USBR contract: Would a 145,000 acre foot reservoir be needed if EBMUD is able to take water from Folsom South Canal or would a smaller size reservoir do as well?

III-39 American River: Assuming EBMUD can take water from the lower American River, is it feasible to pump some of that water to Camanche to meet down stream obligations? What are the impacts of such a proposal?

III-39 Interties: While it is true EBMUD may be able take Delta water instead of going through an intertie with CCWD, wouldn't such an intertie enable EBMUD to deliver Delta water directly rather than having to put it into the terminal reservoirs?

III-41 Alternative to reduce water shortages: Under water banking the figures of 95,000 acre~~feet~~ feet is used where in other parts of the document 150,000 acre feet is used. Why the difference? If the additioinal 55,000 the amount estimated for back-up in case of a Delta outage?

IV-5 first full paragraph: The sentence beginning with "if a water low in minerals" is not clear.

EAST BAY MUNICIPAL UTILITY DISTRICT

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director, ward 5

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2130 adeline st., oakland ca 94623
(415) 835-3000

V-5 EBMUD experience with Delta water: Add a sentence regarding the standards if CCWD treated water would be used by itself as well as blended with Pardee water. 11

IV-13: Conclusions regarding source: Provide basis for statement that a plant to treat Delta water would cost \$370 million. 11

V-1: Analysis of Security Alternatives: Please provide basis for 13 month Delta outage? Does this presume all three aqueducts? What if just one is severed? What if two are put out of commission? 7

V-2 Alternatives for improving security: Groundwater resources, does that include encouraging customers to make use of existing wells for irrigation purposes? 10

V-2 Water conservation: Estimates of water savings appear to be understated? What is impact of new landscape guidelines regarding demand and theoretical savings. 10

V-4: New aqueduct: Need to add thorough discussion of aqueduct which skirts the Delta. 12

V-5: Interties with other agencies: Does San Francisco have to meet down stream rights? If so could EBMUD, through water marketing, satisfy these down stream right holders and in turn be able to obtain significant amounts of Hetch Hetchy water? 10

V-6: Delta water use: In the sentence "The use of Delta water is not a viable alternative for the needed security improvements" the word "viable" should be replaced with the word "recommended." 11

V-8 Supply availability: How much Pardee water went to downstream users in the 1976-77 drought? 9

V-8: Last sentence of first paragraph: The statement flies in the face of our current drought policy which calls for a 25 percent reduction in demand. 3

V-9: Alternatives: Why is storage necessary if taking the USBR contract? Couldn't we take American River water and keep Pardee water in storage? 14

EAST BAY MUNICIPAL UTILITY DISTRICT

a memo from ken kofman
director, ward 5

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V-10: Statement that mandatory changes "are unlikely to be accepted by the public" is an editorial comment. And the acceptance by the public of a drastic change in building codes following the energy crisis and 1976-77 drought would seem to indicate otherwise. (10)

V-10 USBR contract: How often has the minimum flow standards not been met in the lower American River? (14)

V-15: Draining of Upper San Leandro: Given the concern for outage, can we afford to drain this facility? How will the southern area be served in the interim? (19)

V-15: Please quantify the costs of raising existing dams. (15)

V-16: Pinole Reservoir: Why can't the reservoir be filled directly with Mokelumne water? And why can't at the same time the system be upgraded so that people in the Richmond area would have access to Mokelumne water rather than just taking from San Pablo Dam? (30)

V-17 Preliminary Reservoir site evaluation: What are the estimated yearly operating costs of each facility listed? (15)

V-17: Please explain what is meant by the footnote "reservoir location not compatible with distribution system." (29)

V-18: Please explain the necessity for building a tunnel to connect Buckhorn with the Moraga Aqueduct? What about using the existing tunnel connecting Upper San Leandro? (18)

V-28: Please explain in greater detail why the variance in the percentages assigned to the cost of security improvements between the terminal storage proposals. In particular the 30% and 24% figures allocated to new customers as the cost of security improvements. (28)

V-28: Terminal stroage cost allocation: Please show the allocation changes if a 25% limit on rationing is used, and a zero percent etc. (28)

A-1 Theoretical measures: What would be the cost of an expanded leak detection program and what is the cost-benefit projections? (10)

A-2 Advanced plumbing code: Why not a proposal by staff, this appears to be one of the policy questions which should be placed before the board for consideration. (10)

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BUCKHORN CANYON PRESERVATION COUNCIL

6014 College Avenue, Oakland, CA 94618 415-653-6127

Richard Kolm
Asst. Chief Engineer for Planning
EBMUD
PO Box 24055
Oakland, CA 94623

June 13, 1988

Dear Mr. Kolm,

Thank you for the opportunity to comment on the Water Supply Management Program EIR. I might preface my remarks by noting who Buckhorn Canyon Preservation Council (BCPC) is and what it represents. BCPC is a grassroots organization formed a year ago to celebrate the existing value of Buckhorn Canyon as open space and habitat, oppose its inundation by a reservoir, and to build a case for viable, non-structural water management alternatives.

We represent over 400 individuals, about 300 of whom have gone on one of the 21 hikes we have co-located in the Canyon; many have been moved by the beauty and serenity of this hidden canyon and more have probably seen it in the last six months than have experienced it in the last six years thanks to our encouragement and EBMUD's blessing. We have urged municipalities to make resolutions on EBMUD's water management issues and also helped sponsor six well-attended public meetings in Oakland, Orinda, Walnut Creek, Moraga and Orinda in order to air and compare the Buckhorn Reservoir with the other available options. Our volunteer group felt compelled to take these efforts in the interest of opening public debate on the relative merits of the alternatives, along with providing constructive pressure on the EBMUD Board and staff to examine the possible options more carefully. This was done against against a planning backdrop that seemed pre-determined, in which it appeared the EIR process had been co-opted and manipulated to bias it toward the staff's recommendation to build Buckhorn Reservoir. We trust that the staff of EBMUD will take a more even-handed approach in evaluating its recommendations in this next phase; especially to reconsider its expedient solution and fashion a combination of choices that are --unlike Buckhorn-- both cost-effective and environmentally sound.

B . C . P . C . Advisory Council

David Brower
Director,
Earth Island Institute

Lucy Blake
Director,
CA League of
Conservation Voters

Richard Trudeau
Regional Parks
Association

Kathryn Petersen
Director, EBRPD

Harlan Kessel
Director, EBRPD

Malcolm Margolin
Author, Publisher

Ned Robinson
City of Lafayette
Councilmember

John Connors
City of Moraga
Councilmember

Susan Watson
Director,
Save Mount Diablo

Robert Walker
President,
East Bay Trails
Association

Andrew Cohen
Seth Adams
California Water
Policy Group

(Organization names are for
identification purposes only.)

Some specific comments follow:

1) It is not at all clear that EBMUD performed a thorough and balanced evaluation of its reasonable alternatives. The EIR begins with the staff recommendation of constructing Buckhorn Reservoir, in a manner that assumes it as a given rather than attempting to build a rational case for it through a direct and comparative cost-benefit, environmental and community impact analysis of all the alternatives. More than three-quarters of the EIR is devoted to justifying and discussing the impacts of Buckhorn and other dam options. Meanwhile, marginal evaluations are made of water conservation and reclamation, and no mention is made of the potential feasibility of utility inter-ties, nor water pricing and purchase from farmers in the rate base during drought periods. (10)

Moreover, the staff failed to examine the possibility of raising dam heights to increase storage capacity where it might be feasible, for example at San Leandro or Briones Reservoirs. We maintain that a qualitative and impact assessment of a dam level increase option should be performed as part of the Final or a supplemental EIR. (13)

2) The EIR makes a passing reference (p. 5-17) to the "Nature Study Area" represented by the Buckhorn Canyon vicinity in the EBMUD Master Plan of 1970 and Land Use Management Plan of 1985. The reservoir would present a clear violation of the intent of the Educational Use Area designation. In the 1970 masterplan, Buckhorn is considered part of an area categorized as "relatively undisturbed sites with minimum or no development, open to the public . . . for observation and study of plant and animal life, geology and environmental associations. (p. 14). This portion of the plan was evidently not implemented. It is curious that EBMUD can in the last two years suddenly decide that a "Natural Area" is now deemed a reservoir site, and overlook the policy implications of contradicting its own masterplan. (22)

3) Land use impacts are not adequately addressed. A notable case is that of "sensitive receptors" impacted by construction activity. The EIR refers to schools and libraries (p. 5-23), but overlooks hospitals and convalescent homes as legitimate categories. There are several of the latter within 1000 feet of St. Mary's Road and/or Camino Pablo Road. (16)

4) Vegetative impacts are analyzed individually (pp. 5-62 through 5-66) but not in the larger physical context represented by Buckhorn and Kaiser Creeks. For example, it should be noted that while there are no endangered plant species endemic to the area, the particular plant associations are no longer common features of the urban geography. There is less than 5% of intact riparian (23)

areas remaining in metropolitan California. Also about half of the 1124 acres that would be innundated are oak woodland or oak woodland and scrub. How can such high value habitat be replaced with in-kind acreage close in to the urban core? This mitigation issue is not adequately addressed. We suspect that adequate mitigation for the quality and diversity of habitat and open space that would be lost to the reservoir is not possible. (27)

5) Cumulative growth impacts of doubling the district's water storage capacity are not sufficiently evaluated. The perfunctory analysis performed on "Cumulative Impacts" (p. 11-2) skirts the chief issues: 1) the construction of Buckhorn Reservoir does more than reduce an obstacle to urban development, it provides an inducement, particularly when coupled with EBMUD's continuing annexations in the San Ramon Valley; and 2) the important connections between the reservoir proposals and the District's American River diversion effort. These questions should not be avoided in the Final EIR. (25)

We trust that the District will put prudent planning and existing ratepayer-responsive decisions ahead of expansionist policies and strictly structural solutions. A combination of non-structural management policies including conservation, reclamation, inter-ties, rate-base reforms, water-pricing and purchase, together with strengthening the aqueduct (which will eventually be needed anyway) should be strongly considered by the District. It has the benefits of flexibility, cost-effectiveness and responsiveness to EBMUD's existing customers.

Yours truly,



John Otterman
BCPC founder

July 1988

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

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JUN 16 1988

SECRETARY'S OFFICE

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I
urge you to vote:

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JUN 16 1988

OFFICE OF PLANNING

YES, for Buckhorn or Los Vaqueros reservoir,

and

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

Very truly yours,

Gloria L. Frisch
SIGNED
300 Camino Alvarado
Oakland, Ca. 94612

June 13, 1988

Richard L. Kolm
Assistant Chief Engineer for Planning
East Bay Municipal Utility District
P.O. Box 24055
Oakland California 94623

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OFFICE OF PLANNING

Re: Water Supply Management Program

Dear Mr. Kolm,

Thank you for sending me the Draft Environmental Impact Report, the Summary, and the Technical Report. All made for interesting reading.

Although I would have preferred to have a better discussion of alternatives and mitigations in the DEIR, it was not the document per se which bothered me. The real eye-opener came toward the end of the Technical Report in Section V, particularly pages 27 and 28, Allocation of Costs and Financing. Ladies and Gentlemen, you are designing a Cadillac of water systems.

All the aims are worthy; in fact, the continued insistence of worthiness was somewhat tiresome. The costs of all these aims, both financially and environmentally, are, in my opinion, too great. The same set of assumptions that had a validity when the District was young is still being used, even though the conditions of use and the areas and populations served have changed radically.

10

The District can avoid the extremes of doing nothing and of designing for "total" security and "absolute" purity. If one looks at the entirety of delivery systems from water shed to tap, complete security is an illusion. Perhaps, too, it is time to reassess purity. Certainly, it is time to fund more research on filtration processes.

10

There should be a realistic medium possible, one that does not involve the high environmental and financial costs that are detailed in this current DEIR; but to get to that point, there will have to be new policy direction from the Board.

I should hope that such a reassessment is possible.

Sincerely,



Susan Watson
36 Ardor Drive
Orinda, California 94563



26 orinda way • orinda • california 94563 • 415 • 254-3900

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OFFICE OF PLANNING

June 16, 1988

Mr. Richard C. Kolm
Assistant Chief Engineer for Planning
East Bay Municipal Utility District
P.O. Box 24055
Oakland, California 94623

Dear Mr. Kolm:

Thank you for the opportunity to review the Water Supply Management Program Draft Environmental Impact Report. It is during the construction phase that we believe that the Orinda community may be impacted, and accordingly, our comments are directed toward this phase. We do not offer comment on the long term effect, or benefits, of any proposed improvement.

The Buckhorn project includes a 5900 foot tunnel which would "daylight" near King Canyon. In addition, a 23,000 foot pipeline would be constructed from King Canyon to the Moraga Aqueduct. Excavated material will have to be transported from the site, and pipeline and backfill material will be brought into the site. We are concerned about the combined impact of construction of these two facilities (tunnel and pipeline) as follows:

1. What will be the total volume of truck traffic required to construct the two facilities? The DEIR identifies the volume related to the tunnel construction on page 5-106, but not the pipeline. (16)

The tunnel is 5900 feet long and 9 feet in diameter. Is it possible that the number of truckloads resulting from the King Canyon tunneling (250) is underestimated? (16)

2. What portion of this volume in question #1 will travel on Moraga Way?
3. What analysis has been conducted to confirm that the Moraga Way road structure can withstand such volume? Moraga Way is not mentioned on page 5-108, where road structure analysis is proposed. (16)

Mr. Richard C. Kolm
June 7, 1988
Page Two

4. What mitigations are proposed to assure the structural integrity of Moraga Way? On page 2-11 of the DEIR, it is suggested that roadway improvements are recommended, but these improvements are not specified. (27)
5. What are the mitigations that are proposed to provide reasonable vehicular, pedestrian and bicycle safety on Moraga Way during the two to three year construction phase? (27)
6. What mitigations are proposed to reduce truck traffic noise on Moraga Way? (27)
7. The DEIR states that a mitigation "...might be to construct a direct access to Canyon Road south of Camino Pablo." What would be the alignment of this route, and how would it mitigate impacts upon other roads? (27)
8. The DEIR suggests that "(m)itigating measures such as prohibiting peak hour or night truck movements and vanpooling workers would lessen adverse impacts" (2-11), yet on page 5-120, the proposed mitigation is "truck movements on all access roads could be limited to weekdays between 8:00 A.M. and 6:00 P.M.," which does not avoid peak hours. What further mitigations could be taken? (27)
9. On page 5-112, the DEIR calls for up-to-date daily and peak hour traffic counts on several roads to determine the extent of the impacts. Why isn't Moraga Way mentioned? What mitigations would be implemented if impacts are determined to be extensive? (27)

Any one of the three reservoir projects would require an adequate spoils landfill site. Would the choice of reservoir sites for any of the projects have an adverse impact upon the Orinda area, relative to the selection of a spoils landfill site? What landfill sites are proposed? (19)

We would appreciate your response to these comments on this most important program that you are considering. On behalf of the Orinda City Council, thank you for inviting our comments.

Sincerely,

William J. Dabel

William J. Dabel
Mayor

WJD/TS:nh



June 15, 1988

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OFFICE OF PLANNING

Richard L. Kolm,
Assistant Chief Engineer for Planning
EBMUD
P.O. Box 24055
Oakland, CA 94623

SUBJECT: EBMUD Water Supply Management Program

The East Bay Municipal Utility District has prepared a Water Supply Management Program to reduce water supply shortages caused by drought or pipeline failure. Staff has reviewed a copy of the Program Technical Report and Draft Environmental Impact Report. Preliminary comments are contained in this memo.

The Program consists of five elements: additional terminal storage, levee and aqueduct foundation improvements in the Delta, water conservation, water reclamation, and protection of water quality. The additional storage element has potential for significant negative impacts to Lafayette.

Regarding Traffic impacts we do not feel there is sufficient analysis of the impacts on Lafayette streets. The favored method of providing additional terminal storage is construction of the Buckhorn Canyon Reservoir south of Moraga. A significant impact of this alternative is construction traffic. Construction is expected to take approximately four years. The majority of construction traffic would pass through a staging area off Redwood Road; this traffic would likely arrive via I-580 and Casto Valley. An unidentified portion of the traffic would terminate at a staging area at the end of Camino Pablo in Moraga. This traffic would use Moraga Way or Moraga Road and possibly impact the City of Lafayette. In addition, construction of a pumping plant and pipeline along St. Mary's Road in the Town of Moraga may generate construction traffic over Lafayette streets and cause a shift in commuter traffic from St. Mary's Road/Glenside Drive/Reliez Station Road to Moraga Road.

While the DEIR suggests a number of general traffic mitigation measures, the DEIR does not cover mitigation of traffic to Lafayette streets. The DEIR should be amended to thoroughly address impacts on Lafayette and necessary mitigation. Very detailed and specific impacts and mitigation would need to be provided during review of the specific Buckhorn Canyon Reservoir project if that is the reservoir site ultimately selected.

At the very least, the City of Lafayette's natural expectation is that all City roads would be returned to the condition that existed prior to construction.

4 Regarding the underlying need for the expanded terminal capacity, our staff review has found some questionable assumptions, as well as exaggerated statistics in the DEIR and Technical Report. In particular, it is stated that anticipated water usage is to increase 23% from 220 to 270 MGD by the year 2020. Elsewhere, it is admitted that the population of the District is only projected to grow 7% based on the general plans and studies of the affected cities, ABAG and the State Dept. of Finance (TIII-22). The reports contain efforts to partially explain away this variance by two means. First, it is declared that future residents will use substantially more water per household than existing residents. This increased usage is both doubtful and avoidable. Water conserving toilets, showers etc. and other conservative techniques are much easier to require in new development than in existing development. It is more reasonable to assume that water usage should not grow any faster than the increase in households and probably even slower. There is also an unexplained disparity between the projected 7% population growth rate and the 21% household growth rate.

The second method used to explain away the variance between EBMUD's projected needs and the planned growth of the communities served is by doubting either the seriousness or competence of the cities to plan their growth (DEIR 10-3). It is declared that EBMUD's projections only imperfectly reflect local government's intentions (i.e. they disagree with or discount local plans). EBMUD believes that this disagreement is justified because in many cases local government plans are "in a state of flux". It is also implied that based on "historic trends" recognized by the EBMUD Board of Directors, but not by the local communities, real growth and the resulting demand for water will occur much faster than is projected by the local governments. Consequently, the local general plans will be amended. While there is some historic truth to these assumptions, our present system of law is to give local general plans precedence over alternative estimates, such as these contained in your report. Given the nearly built-out nature of most of the areas served by EBMUD and the slow-growth reaction in other parts of the EBMUD district, the 7% increase seems much more reasonable than EBMUD's 23% figure.

The DEIR does review a variety of water conservation measures and comments on the effectiveness of each. There seems to be a bias toward discounting the effectiveness of conservation measures. It seems improbable that an aggressive program of water conservation and reclamation could only result in a 5% reduction in consumption by the year 2020 (TIII-23). This dismissal of an

10

important role for conservation and reclamation appears to indicate a reluctance by EBMUD to actually reduce consumption during normal years. The City of Lafayette promotes the wise and careful use of water, but is not supportive of an accelerating rate structure which does not account for the different climatic conditions in EBMUD's service area.

3

The impact on the existing water line in Moraga Road does not appear to be addressed. Will the Buckhorn project cause a need for modification to the existing line and if so, how will the resulting construction impact Moraga Road in Lafayette? The water line feeds the filtration facility in Lafayette.

16

4

The City of Lafayette does not disagree with the EBMUD's stated goal of expanding terminal capacity to protect water quality and provide protection against recurrent droughts and pipe-line disruptions. However, the rather non-objective tone of EBMUD's environmental documents unfortunately causes uncertainty that the purpose of EBMUD's program is as stated. The summary states that service beyond the ultimate boundary is not included in the projected demand, "except for the recently annexed areas east of Danville". It is well known that there is a considerable amount of vacant land particularly east of Danville and San Ramon and not currently within EBMUD's boundaries that has been the subject of development requests in Contra Costa County. According to the San Ramon Planning Department which is conducting general plan amendments for such projects, the probable water source is assumed to be EBMUD. If further exceptions or expansions occur in these sorts of situations, as has already happened, it is doubtful that the stated goal of maintaining high water quality and drought protection would actually be achieved.

We thank you for the opportunity to comment on these important issues. We hope that the points raised here will be carefully considered and responded to.

Very truly yours,



Robert F. D. Adams
City Manager

cc: PDC
File
City Engineer, City Council
Gen. Manager, EBMUD

EP:jkh
6888.ltr

1069 Miller Avenue
Berkeley, CA 94708
June 15, 1988

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JUN 16 1988

OFFICE OF PLANNING

Richard L. Kolm
Assistant Chief Engineer for Planning
EBMUD, P. O. Box 24055
Oakland, CA 94623

Dear Mr. Kolm:

This letter is written to comment upon the April 1988 Water Supply Management Program proposed by EBMUD. More specifically, the comments are directed toward planning for use of reclaimed wastewater in the San Ramon-Walnut Creek corridor.

It is recommended that EBMUD perform additional and more extensive planning in regard to this option. The possibility of a sizable advanced waste treatment facility should be evaluated along with a distribution main for delivering reclaimed water along the length of the San Ramon-Walnut Creek corridor. The high quality effluent could be used presently for irrigation of parks, greenspaces, common areas, pastures, schoolyards, golf courses, firebreaks, and freeway landscaping. In low demand periods high quality effluent could be discharged to local streams for flow augmentation. It should be noted that such water will also enhance wetlands and there receive additional natural treatment before entering the San Francisco Bay complex. (10)

There are, of course, important benefits and difficulties associated with such a plan and the major features of both will be briefly noted here. Professional planning would fully and systematically delineate and evaluate these benefits and difficulties. Benefits will be noted first and then difficulties will be considered.

First, as Professor Dan Okun has so convincingly argued, highest quality water should be used for drinking, culinary purposes, bathing and laundry, with lower quality water used for sanitary purposes and exterior irrigation. His argument is right on the mark for the areas east of the Berkeley Hills, where exterior use is high. There is no reason to use high quality Sierra Mountain water for irrigation in this area of warm temperatures and large landscaped areas. The remarkable high quality Sierra water should be saved for its highest purpose: human consumption.

Second, during periods of shortage such as 1988, use of high quality effluent for irrigation purposes would relieve east of the Hills irrigators from severe pressures to conserve and the subsequent loss of valuable plantings. With a large capacity advanced waste treatment plant and distribution main, adequate water at a reasonable price would

be available even during the driest and hottest summers for irrigation of large areas of the San Ramon-Walnut Creek corridor. West of the Hills residents would surely approve of such a plan since both areas would have the same rate schedule and use restrictions for drinking water. East of the Hills consumers should like the plan because they would have ample water available for unrestricted irrigation.

Third, this plan would increase beneficial regional cooperation in the East Bay Area. Currently, EBMUD does not provide wastewater collection and treatment services east of the Hills. Lacking a market for reclaimed wastewater, agencies serving this area seek disposal to the San Francisco Bay complex which has created regional conflict rather than cooperation. Providing a market for reclaimed wastewater would lessen need for wastewater disposal to the Bay while responding to the demand for irrigation for landscape and greenspace areas. Thus a double environmental enhancement is possible: commodious greenspace in the San Ramon-Walnut Creek area would be enhanced while further degradation of the San Francisco Bay complex would be avoided.

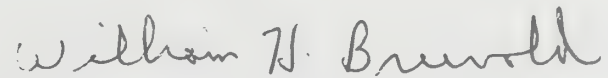
The first difficulty that should be considered is the cost and complexity of retrofitting a dual system for irrigation use. Such retrofitting has been successfully accomplished by the Las Virgines Water District north of Los Angeles in Southern California. Written reports of this successful venture are available from the District and I'm sure that personnel from Las Virgines would be pleased to describe their program to EBMUD staff. Undoubtedly costs of installing a retrofit are high. However, viewed from a regional perspective, they may not be much higher than construction of main sewer lines and outfalls into the San Francisco Bay from interior East Bay regions. Further, regional cost sharing is a real possibility that should be investigated. It may well be that benefits derived from not constructing major pipelines and outfalls could be applied to construction of a dual distribution system in the San Ramon-Walnut Creek corridor.

Second, it may be argued that affluent residential areas such as those existing in the the San Ramon-Walnut Creek corridor will not accept reclaimed water for landscape irrigation. Evidence from Irvine and Las Virgines indicates that affluent communities do and will support the dual water system concept and have very positive attitudes about using reclaimed water in this manner. I have publications related to this issue that I would be most pleased to share with your staff if so requested.

Third, it may be noted that current State of California regulations do not allow homeowner control and application of reclaimed water for residential irrigation. However, it may also be noted that responsible officials currently in charge of this State program are more reasonable and supportive of residential reclamation and reuse than has been the case in the past. It may well be that a superior program of cross-connection control that EBMUD is capable of planning and implementing could well convince the State to relax its regulations in this matter. Further arguments for such a relaxation would derive from operating an advanced wastewater treatment plant so that it reliably produces a very high quality effluent. In any case, planning should scale the size of

the advanced waste treatment plant and distribution main to accommodate such use in the future. In the meantime, irrigation practices that are currently approved by the State, including professionally controlled irrigation of residential lawns and landscapes, provide a significant market for very beneficial uses of reclaimed water in the San Ramon-Walnut Creek corridor.

Sincerely,

A handwritten signature in cursive script that reads "William H. Bruvold". The ink is dark and the handwriting is fluid.

William H. Bruvold, Ph.D.
Professor
School of Public Health
University of California, Berkeley

Mr. and Mrs. R. V. Osmon
120 Walford Drive
Moraga, CA 94556

June 13, 1988

Richard L. Kolm
Assistant Chief Engineer for Planning
EBMUD, P.O. Box 34055,
Oakland, CA 94623

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JUN 16 1988

OFFICE OF PLANNING

Subject: EBMUD's Water Supply Management Program;
Specifically, the proposed Buckthorn Reservoir

We have read the written material you have supplied concerning the proposed Buckthorn Project and Reservoir.

We are strongly opposed to it!!

Our observations are as follows:

10 1. You have highly underestimated the effectiveness of water conservation measures when applied on a year round basis. There are water conservation measures available that most consumers have not even thought of yet.

21 2. Your statement to the effect that there are no active earthquake faults in the area is patently MISLEADING! There were 6 earthquake events in the area during the period 1967 to 1977. This increased more than triple-fold to 21 events after the San Leandro Reservoir was built during the period 1977 to 1987.

Conclusion: The lives and property of Moragans and those of other adjacent communities WOULD BE AT GREAT RISK due to possible earthquake damage to the proposed project. Only last night at 6:45pm we felt the rolling type earthquake centered 10 miles north of San Jose which measured about 5.1 in strength.

26 3. Moragans would not enjoy any water from the project.

28 4. Moragans would get to help pay for this project.

19 5. Moragans would get to experience additional fog and a slight but significant and permanent change in temperatures.

16 6. We, since our property backs up to Camino Pablo, would have to endure the noise, dust, restricted road access, and sleepless nights (during night-time construction) for what you say would be ten (10) months. Based upon other construction schedules, we say you have underestimated this period by a factor of as much as 2.5, making the period more like two years to complete the Buckthorn Tunnel or aqueduct! THIS WOULD BE INTOLERABLE AND UNACCEPTABLE!

27 7. Who gets to pay for the physical damage to the property of those of us who happen to be along the route of the proposed

aqueduct?? The heavy equipment and large trucks can and will produce considerable vibration (like shock waves through the ground) and dust. Are you prepared to pay for the damage the heavy dust in the air can cause to our homes and to the health of our families?? Are you prepared to pay for the damage the vibration of construction can do to the structures of our homes, including the foundations?? I CANNOT THINK OF A SINGLE REASON WHY MORAGANS NEAR AND ALONG THE PROPOSED SEVEN FOOT DIAMETER AQUEDUCT ROUTE SHOULD SUFFER OR PAY FOR THESE POTENTIAL PROPERTY-DAMAGING EFFECTS!!

19

8. I have every confidence that should EBMUD decide to go ahead with this project, there will be literally hundreds of legal actions taken against you--just from the people in Moraga!

16

9. The extension of your service area to areas such as the San Ramon Valley, which is the main reason you allegedly need more reservoir area, is a faulty, irresponsible, and extremely politically motivated move. EBMUD'S concern should be confined to the growth requirements WITHIN ITS CURRENT SERVICE AREA, AND NOT GO OUT AND SEEK NEW MARKETS. EBMUD'S RESPONSIBILITY SHOULD BE TO ITS EXISTING CUSTOMERS, NOT TO THE DEVELOPERS AND RESULTANT NEW CUSTOMERS IN A NEW MARKET AREA!

29

10. You have not given the same in-depth consideration to the Pinole and to the Los Vaqueros Reservoir possibilities as you have to the proposed Buckthorn Project. It is like you had already decided on Buckthorn, but had to make it look good on the surface.

1

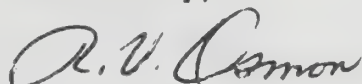
11. The approximate 6 week review period ending June 17, 1988 is extremely short, obviously politically motivated, arbitrary, and irresponsible to your existing customers from whom you allegedly seek public review! The feeling that many of us have is that you are trying to ram this project thru while paying lip service to the "the public review" process. IT CERTAINLY MAKES ONE QUESTION THE MOTIVATION AND PLANNING SKILLS OF THE EBMUD BOARD OF DIRECTORS AND ITS MANAGEMENT! This project, or any one similar to it, would have such a huge impact upon the lives of those nearby that a mere 6 week public review period is absurd!

10

12. The alternatives available are sufficient to supply the projected water needs in your existing (unexpanded) service area.

When you reply to this letter, I would appreciate it if you would address each numbered item separately. Thank you.

Sincerely,



R. V. Osmon

cc: Moraga Town Council

Mr. Richard L. Kolm
 Assistant Chief Engineer for Planning
 EBMUD

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JUN 16 1988

Dear Mr. Kolm,

OFFICE OF PLANNING

I have the following comments regarding the Draft Environmental Impact Report for EBMUD's Water Supply Management Program:

- I. My concerns are with the impacts on fishery resources by the proposed Buckhorn Project. In California, fish and wildlife are not the property of the landowner but are instead considered a public resource.

Upper San Leandro Reservoir (USLR) and its tributaries contain a native, land-locked population of coastal rainbow trout. These trout are historically significant because Salmo irideus (the old scientific name) was described as a species from specimens collected from San Leandro Creek in 1855. Furthermore, a recent scientific study concluded, "The trout in the Upper San Leandro Reservoir should be considered valuable scientifically because of their unprecedented genetic integrity and managed to conserve this uniqueness" (Gall et al, manuscript submitted for publication).

Clearly then, this trout population is an important resource and appreciable reductions in population size would be a "significant effect", defined by CEQA (Sections 21002.1(a) and 21068) as substantial, or potentially substantial, adverse" changes in the environment.

II. The EIR is inadequate on several accounts:

1. The State Resource Agency Guidelines (15140(c)) state that EIRs shall contain sufficient information to permit "full assessment of significant environmental impacts" by agencies and the public. The EIR does not provide sufficient information to allow one to predict the impact of the Buckhorn Project on the viability of the USLR trout population. Specifically, the EIR does not 1) estimate the reduction in trout population size in USLR given construction of the Buckhorn Project and 2) estimate the increased risk because of increased dependence on the other more accessible (thus more vulnerable) tributary creeks.

a. The EIR estimates that 26,000 linear feet of spawning habitat would be inundated and that another 1,000 feet would be isolated above Buckhorn Reservoir. However, there is no estimate given for the total spawning habitat available in the USLR watershed, so we cannot determine the total percentage of spawning habitat that is lost due to the Buckhorn Project. Thus, we have no way to determine the significance of the loss of the aforementioned 26,000 feet of spawning habitat.

b. The same comment goes for nursery and rearing habitat (for young of the year and juvenile trout, respectively). Although the EIR neglects to mention this, the trout rear in the tributary creeks for 1-2 years before migrating down to USLR (Gall et al, man. sub publ). The EIR does ^{not} give any estimates for total nursery and rearing habitat available in the USLR watershed

and worse yet does not give any estimates at all for the amount of nursery and rearing habitat that would be lost in Buckhorn and Kaiser Creeks if the project was constructed. Therefore, we have no way of determining, from the EIR, how severe the impact of the Buckhorn Project would be, in this case, on nursery and rearing habitat.

23

c. Why were there no fish population estimates made for Buckhorn and Kaiser Creeks and the rest of the creeks tributary to the lake? Again, without such data, one cannot get an idea of total trout production in the creeks and what proportion of that is contributed by Buckhorn and Kaiser Creeks.

The EIR needs to answer the questions raised above in a, b, c if we are to determine the reduction in total trout population size due to the Buckhorn Project and thus how much at risk is the trout population as a whole.

A complicating factor is that Buckhorn and Kaiser Creeks are among the best protected of the USLR tributaries against human-related catastrophic events. The EIR states that the other major tributaries are located near public roads or private land, "and are thus more susceptible to disturbances such as siltation and water pollution." Furthermore, the EIR reports that such degradation is already occurring on Upper San Leandro Creek. Thus, from a "security" standpoint, because of the loss of Buckhorn and Kaiser Creeks given the Buckhorn Project, the trout population will become more vulnerable to siltation, chemical spills from traffic accidents, and urban runoff since the population would be relatively more dependent on the other, more accessible creeks.

23

It is critical that the expected impact of the Buckhorn Project on the fishery resource be more specifically determined, not only from the standpoint of risk to the trout population but also so that we will know how extensive mitigation measures must be.

2. CEQA (21002, 21002(a) and (b), 21081) and the Guidelines (15088a(1), 15088(d)) mandate that agencies mitigate or avoid the significant environmental effects of proposed projects. Furthermore, there must be a detailed statement of mitigation measures and these mitigation measures must provide for a substantial reduction in damage, so that they will eliminate such impacts or reduce them to a level of insignificance (CEQA 21100(c), 21002, 21100(c); Guidelines 15143(c), 15088(d)).

19

The EIR lists various potential mitigation measures on page 5-95-96; however, these two brief paragraphs do not constitute a "detailed statement". Furthermore, the EIR does not state nor demonstrate whether the mitigation measures mentioned will provide for "substantial reduction in damage" or "eliminate such impacts or reduce them to a level of insignificance." This is not surprising since, as mentioned previously, EBMUD does not know the degree of impact the Buckhorn Project would be expected to have on the unique trout of the USLR system.

Gall, G.A.E., B. Bentley, and R.C. Nuzum. Rainbow trout of Kaiser and Redwood Creeks, Contra Costa County, California. manuscript submitted to Calif. Fish and Game.

19

A question- Does EBMUD intend to try to maintain a population of the native trout in the proposed Buckhorn Reservoir and if so how would they maintain said population in the event of a drought?

Sincerely,

Glenn S. Yoshioka

Glenn S. Yoshioka
B.S. 1983. Wildlife and Fisheries
Biology. University of California, Davis

65 Southlake Court
San Jose, CA 95138

66
Elliott L. Abers
154 Selborne Wy
Moraga Ca, 94556

Richard L. Kolm.
Asst. Chief Eng.
FBMUD, P.O. Box 24055
Oakland Ca, 94623

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JUN 16 1988

OFFICE OF PLANNING

Dear Mr. Kolm.

Below are listed my concerns concerning
the FIR re: Buckhorn Dam.

- (16) 1. How deep will trench on Camino Pablo be?
- (19) 2. How will water table be changed in vicinity of Buckhorn when a steady state situation is reached?
- (20) 3. What effect on security of Buckhorn will be caused by the "moderate to severe" existing erosion conditions?
- (19) 4. Can you give a more detailed explanation as to why climatic conditions will only be slightly changed?

Elliott L. Abers.

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6/13/88

JUN 15 1988

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SECRETARY'S OFFICE

JUN 16 1988

OFFICE OF PLANNING

EBMUD Board

I am writing in support of the Sierra Club position on E.B.M.U.D.'s management both long term and in regard to the present water shortage.

I am especially concerned by the plan to flood Buckhorn and Kaiser Canyons. You frequently mention concern about the effects an earthquake would have on the levees in the delta & Mokelumne Aqueduct. Buckhorn & Kaiser are certainly going to be threatened by earthquake damage since they are located near all three major faults in the East Bay. Have you thought about what would happen should the dam break and all that water was released? How many thousands would be washed into the sea?

I don't want to pay for expensive new water projects that are not needed or accept the destruction of a beautiful East Bay habitat.

Margorie Bowman
1815 Elm St.
El Cerrito, Ca. 94530

George E. Aiken
136 Hodges Drive
Moraga, California 94556

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SECRETARY'S OFFICE

68

June 12, 1988

Mr. Sanford Skaggs
EBMUD Board President
2130 Adeline Street
Oakland, CA 94623

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JUN 16 1988
OFFICE OF PLANNING

Dear Mr. Skaggs:

In connection with the draft EIR on the Buckhorn Reservoir project I would like to make a few comments.

It seems to me that the draft EIR was only directed to Buckhorn and that other alternatives were not given equal consideration. Therefore, it was not possible to make adequate comparisons between the sites.


10

Another matter that is not addressed in the EIR is the subject of the effect of the height of proposed water at Buckhorn on the existing water table in the Moraga area. Where I live the water table is within 3-4 feet, or less in wet winters, of the surface. Buckhorn could be a disaster for some of us if a high hydrostatic head were to affect the present water table. I hope the final EIR will address this potential problem!

19

Thankyou for taking time to consider all the worries of the Moraga residents.

Yours truly,


George E. Aiken, P.E.

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JUN 14 1988

SECRETARY'S OFFICE

June 11, 1988

Mr. Jerome B. Gilbert, General Manager
Board of Directors
East Bay Municipal Utility District
2130 Adeline Street
Oakland, CA. 94623

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JUN 16 1988

OFFICE OF PLANNING

Dear Mr. Gilbert and Board Members:

Thank you for your reply to my May 27 letter concerning American River water. I appreciate that the Water Resources Control Board would not approve use during drought. However, I believe that what has been the established policy by the Board might be legislatively changed if it could be shown to be both desirable and necessary. If that could be accomplished the end result would be far more desirable than the growth inducing Buckhorn proposal.

23 It is inescapable that Buckhorn was planned to answer both present and projected growth needs, particularly in the San Ramon area. Buckhorn is now being used as an answer to periodic water shortages with apparently little regard to the destruction of valued ecological and anthropological sites. Likewise, seismic considerations have been ignored and, in this connection, I point out the very recent closure of the California Aqueduct because of a quake and the additional facts of the presence of two nearby active faults and other minor faults in the Buckhorn vicinity. Energy could be transferred along the minor faults, resulting in damage as readily as if the quake energy were on the major and more known faults. Further, suffice it to say that (1) you would short change Bay-side water users who would be forced to pay over half the cost of Buckhorn when they wouldn't really need it unless because of the encouraged overgrowth east of the hills, and (2) there are other alternatives that could be more beneficial and possibly less costly in the long run.

21 Although I much appreciate that EBMUD has a fine staff and also has done many good things in its public relations, there are very good reasons why I am one of EBMUD's severest critics. They all relate to your growth inducing policies and/or an empire building form of willingness to accept annexations that are mutually self encouraging. Along with these faults is an apparent lack of or suppression of constructive imagination. I am not against growth. I want it thoughtfully and intelligently controlled. Without question, your policies have been contrary to growth control despite the fact that water availability could have been a very important growth control factor in the Bay Area during the last twenty years.

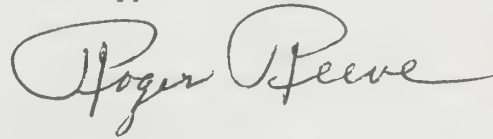
28 All of us know about the southern empire built by the Metropolitan Water District. What all of us also should know is that many people down there, including the retired, have been seeking to escape the problems of population overgrowth and urban blight produced by that empire, and many have been moving to central California locations all the way from Alameda and Contra Costa Counties to Auburn, Placerville, etc. In addition Orange County voters now are seeking means to control growth - years too late. I see EBMUD's present policies as leading to a repetition of Orange County. East Bay counties grew by 12 percent in the past seven years and most of that growth was localized within EBMUD's borders.

14 Now, to suggest an alternative to Buckhorn that is different: Why not an eventual merger of EBMUD, Contra Costa Water District, and Zone 7 (?) of the Alameda County Water Conservation District to use American River water at some future date? One of the

smaller, unproductive Delta islands could be isolated by daming and flooding with reasonably fresh Sacramento River water to flush it before replacing it with American River water that all three districts could use. This could be a boon to the Contra Costa Water District and quite important to LBAUD in times of drought. Further, why not tie it in with a bond promoting effort for the larger joining agricultural area to improve the levies?

If you are going to empire build, let's do it in the most desirable way possible - one of multiple public benefits.

Sincerely,

A handwritten signature in cursive script, reading "Roger Reeve". The signature is fluid and elegant, with a large initial 'R' and a long, sweeping tail on the 'e'.

cc - Assemblymen Thomas Bates

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JUN 17 1988

June 15, 1988

EBMUD Board of Directors
and Richard L. Kolm, Ass. Chief
Engineer for Planning,

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JUN 17 1988

SECRETARY'S OFFICE

We appreciate the opportunity to comment on the Water Supply Management Program Draft Environmental Impact Report. Basically, we should not even have to comment as this proposal or project should not even be contemplated by EBMUD.

The EIR was not correct in a number of items such as "active" earthquake faults, impact on roads and community, time + cost of project, nor alternatives, many others.

Since you have annexed the San Ramon + surrounding areas recently - you now are responsible for the added growth which has already increased considerably. More people are not needed in an area which "did not" have adequate water supplies nor roads to handle the growth. We do not need another L.A. Thanks, but no.

And the huge amount of water that Buckhorn Reservoir will take will only add to the problems of salination + waste of beautiful rivers. Do not build Buckhorn Dam! Mary Lynn and Ed. Hartman

2

24

19

71

**Comments on
Proposed EBMUD Water Supply Management Program
submitted by**

Edgar Mendelsohn
108 Barrett Court
Danville CA 94526

Phone: W (415) 422-6591 H (415) 837-4783
June 17, 1988

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JUN 17 1988

OFFICE OF PLANNING

INTRODUCTION

The following comments address two of the basic issues which are dealt with in the EBMUD Water Management Report:

- *choice of an additional reservoir or alternate pipeline for overcoming certain catastrophic events which would impede EBMUD water deliveries*
- *how to deal with periodic droughts resulting from naturally varying weather patterns*

The essence of my comments is as follows. The choice with respect to safeguarding water deliveries (whether reservoir or alternate pipeline) under adverse circumstances should be dictated by the effectiveness with which that choice can maintain a semblance of normal water deliveries to the district's customers while repairs are underway. If that criterion is accepted, the analysis provided here favors the alternate pipeline. - On the issue of how to deal with periodic droughts arising from naturally varying weather patterns I am presenting ideas which have not been dealt with in EBMUD's report; I also comment on EBMUD's inertia in preparing for these regularly recurring water shortfalls in an innovative and sensible way.

1. Security: Reservoir or Pipeline

1.1 General Problem

Certain catastrophic events outlined in the Report could disrupt vital water deliveries to EBMUD's customers. It is commendable that the district is preparing for such an emergency; we as customers should share these concerns and support any reasonable solution subject to financial and other legitimate considerations. The most viable criteria in looking at possible solutions are how they assure the semblance of an adequate supply of water for a reasonable period of time while repairs of disrupted facilities are underway, and the financial impact of each proposal on the customers' monthly water bills. - Two alternatives are being considered by EBMUD. One assumes that Buckhorn exists and that the district is forced to supply its customers from all available East Bay reservoirs (i.e. the existing pipelines are not operating and will stay shut down for some period of time - possibly many months). In the other Buckhorn does not exist but there are alternate newly built pipelines available. I am now presenting a table to compare these two proposals:

Table 1.2
Cost/Benefit/Risk Comparison:
Buckhorn Reservoir vs. Alternate Pipeline

Remarks	Buckhorn Reservoir Proposal	Alternate Pipeline Proposal
1. Construction Cost	\$ 170 M	\$ 265 M
Land Acquisition	?	None
Total Cost	\$ 170 M + Land	\$ 265 M
2. Operational Capacity	143 KAF = 46,594 M Gallons	325 MGD (Million Gallons/day)
3. Normal Daily Water Use	225 MGD	225 MGD
4. Number of days Supply	207 days (if full at start and allowed to be depleted)	normal
5. Average Monthly Cost to Residential Customers	?	?
6. Benefit in case of Main Pipeline Disruption	Uncertain supply if repairs take time	normal supply available
7. Time to complete	?	?
8. Drought Recovery Time	4 years	Not applicable
9. Earthquake Effect	Potentially Catastrophic	Modest

1.3 Discussion of Table 1.2 - Buckhorn Reservoir

A number of comments are in order. First, district engineers have stated at public meetings that if a major flooding disaster occurs - assuming that a significant length of the now existing pipeline is washed away - repairs may take up to a year or longer to complete or at least until normal service is restored. Under those circumstances - looking at the Buckhorn proposal - the number of days of normal water supplies available may be marginal in providing an effective hedge. Also, that number may be misleading because in an emergency the district - looking at a potentially long term disruption - would prudently limit water consumption. Thus the number of days of normal service available to district customers might be much smaller, possibly requiring water rationing at an earlier point in time. Of course, the other low capacity local reservoirs would stretch the total number of delivery days by possibly up to a factor of two; nonetheless it is instructive to see the modest impact of Buckhorn on solving the problem of security. Note that depleting East Bay reservoirs significantly (very rarely done if at all) would also negatively impact the associated recreational activities.

Buckhorn Reservoir would be built close to an active major earthquake fault (the Hayward Fault). There is very little experience available on building dams near major earthquake faults, and how that impacts construction costs due to the need for a far more robust structure. District engineers should

show that their cost estimates for Buckhorn are realistic and that they have allowed fully for earthquake resistance and possible other geological surprises which might be encountered during construction. Note that a primary factor in the enormous cost overrun of Diablo Canyon was the discovery of additional seismic risks after construction had already begun. - Furthermore, the impact of increased liability insurance premiums on operating costs due to the increased risks of having built a dam near an active earth quake fault should be explored.

21

1.4 Discussion of Table 1.2: The Alternate Pipeline

On the other hand, building pipelines is a far more routine business in this country where thousands of miles have been laid - for water, oil, natural gas and other substances. Construction methods are well characterized, and uncertainties much reduced. There is little opposition to this concept; therefore it could be started and completed in a timely fashion. All that would indicate the probability of cost overruns for a new alternate pipeline to be significantly less than for Buckhorn Reservoir.

1.5 Security Summary

In summary then, if the increased cost of the alternate pipeline proposal is acceptable the increased benefits should greatly count in its favor. Having an uninterrupted supply of water in case of disaster while long-lasting repairs are in progress is of paramount importance. Also, because the pipeline proposal is much less controversial than Buckhorn, it would most likely be completed much sooner than if the choice fell on Buckhorn. Buckhorn could be tied up in litigation for years, thereby increasing its cost significantly.

15

2. How to deal with Droughts

2.1 General Problem

The second issue facing EBMUD is how to deal with droughts. It appears that for the majority of years - when watershed runoff is at or above normal - the district has no problem supplying its customers with adequate amounts of water. During a small number of years the runoff is below normal. When such years fall in succession - and they tend to do so - the district has a shortfall. There is a drought now (its started last year) and there was a drought in 1976/77. - At time of droughts there is an adequate alternate supply of water available from the Delta Region; EBMUD has resisted using that source because Delta water is of lower quality than normal EBMUD supplies. However, during the 1976/77 drought EBMUD did use Delta water, and will have to do so again if the present drought continues for another year. It should be noted that treated Delta water is used statewide by several water districts on a routine basis.

11

2.2 EBMUD's Response to Droughts

One of the primary responses of EBMUD to periodic droughts has been somewhat strange. Essentially, it has adopted a philosophy of permanently discouraging residential water use - drought or no drought. The district is spending increasing amounts of dollars (approaching multi-million levels) toward that purpose. It has recommended a number of measures (some of them bizarre: i.e. low water use WCs which will most likely block up far more easily than normal ones) to reduce water consumption. Certain of these measures are now being considered as being made mandatory, forcing customers to spend significant amounts of money toward their implementation and placing EBMUD staff in a policeman role. However, lower water use - even in periods of normal rainfall - will not result in reducing average residential water bills. The reason is that most of EBMUD's costs are fixed regardless of residential water consumption; thus on the average the district must collect the same amount of money from each customer (that's why in many other parts of the country people do not have water meters but pay a fixed fee). EBMUD is now increasingly involved, through a variety of actions, in curtailing the right of its present customers to enjoy the blessings of water in their daily lives - in the areas of sanitation, hygiene, convenience and creating an attractive environment through

landscaping. Common areas for youth sports and other recreation are also negatively impacted. - In short, EBMUD is beginning to deny its basic function as a water district: to provide reasonable supplies of water for customary uses at realistic prices.

2.3 Why EBMUD's Response will not work

EBMUD clearly has an occasional drought problem and that problem will recur with fair regularity in the future. Unfortunately the district is not exploring all possible avenues to alleviate that problem. Buckhorn with a 200 day supply is not going to solve the problem of a multi-year drought. Nor will the problem be solved by encouraging water conservation; such savings will be immediately eaten up by the thousands of new hookups EBMUD makes every year. Furthermore, EBMUD customers become jaded when they observe the prolific waste of water by a major developer at the corner of Dougherty and Crow Canyon Road who uses millions of gallons of water every day just to compact fill dirt while a drought is going on. - Short term the problem can be solved by judiciously utilizing Delta water at time of drought. Such a step has been resisted by EBMUD for the sake of maintaining the highest possible quality of water. In pursuing that policy who benefits and who gets hurt?

2.4 East and West of the 'Hills': The Big Difference

EBMUD residential users can (in somewhat simplistic fashion) be subdivided into two groups: those living West of the hills and the ones living East of the hills. Their primary difference in water consumption is a factor of two, as shown by EBMUD studies. What accounts for the difference is mainly due to landscaping and climate. On the average, people living East of the hills maintain greater amounts of landscaping and do so in a drier climate when compared to people West of the hills. I feel that this presence of high caliber landscaping is environmentally sound and esthetically attractive. It uplifts the mind and soul, is beneficial to small wildlife, and has a good effect on people's health and well-being. Additionally, it generates positive community spirit and local civic pride. Good and ample landscaping should be encouraged - not met with punitive measures as is presently done by EBMUD. The experience of a reported loss of about 80 Million dollars (mostly East of the hills) in landscaping during the 1976/77 drought is tragic. The fact that such an experience could repeat itself and that we have knowingly done nothing to prevent it is inexcusable.

The question then arises: why all this inertia and pursuit of negative remedies in the district. The answer must be sought in the social differences of the two groups. For most people West of the hills the drought rations are more than sufficient; they clearly like the idea of a continuing supply of high quality water at no significant increase in cost - on the average their landscaping is modest. The people East of the hills face serious losses: either they give up precious landscaping lovingly cultivated over the years, or they pay significantly higher punitive water rates - painful financial hardships and possible loss of intangible assets in either case. Most of the people East of the hills would clearly prefer having additional Delta water to keep their landscaping alive at a reasonable cost; those concerned about drinking water quality could purchase bottled water at a reasonable cost and still come out ahead. Clearly, there is a distinct difference in outlook between the two groups of people - can they both be accommodated? So far EBMUD appears not to have tried any new initiative working toward that goal.

2.5 Let's Look at New Initiatives

In what follows I am trying to pursue an idea for a short term solution. It may not be new, but I have not seen it mentioned. Possibly it is not even practical, but at least it deserves discussion. The idea is this: assuming that EBMUD has - roughly speaking - two groups of customers which are geographically and topologically separated, can they be served in a different manner during a drought? Specifically, can one group be served with small rations of high quality water; the other with more generous supplies of lesser quality water - both at reasonable cost? For example, EBMUD has several reservoirs and different filtering plants at various locations. Can these operations be separated into two groupings each working in a different mode? If it can be done, what would be the costs of doing it (as compared to the costs of not doing it, of course). I believe this should be looked into. Of course local governments should be consulted. Maybe there are other ideas that can be

pursued. But let's get off EBMUD's present philosophy of an ever tightening water valve, a philosophy of promoting the idea of a permanent water scarcity, including the active discouragement of reasonable water use for a n attractive environment and a good standard of living.

Table 2.6
Suggested Dual Delivery Schedule in Case of Drought

	Condition	Customers West	Customers East
Phase 1:	1st year of drought	no restrictions	no restrictions
Phase 2:	2nd year of drought (June - Oct)	400 gals of high quality water	800 gals of mixed water 400 high quality 400 treated Delta
Phase 3:	2nd year of drought (Nov-March) if drought continues	400 gals of high quality water	400 gals of mixed water (at least half & half or better)
Phase 4:	3rd year of drought	400 gals of best mix available	treated Delta water in best available quantities

2..7 Longterm a Large Reservoir may be needed

To truly insure long term against drought problems the district may need another large reservoir. To make sense that reservoir should hold at least a 1 year supply of water (about twice the volume of Buckhorn). District staff should explore suitable sites, particularly with a view toward utilizing the now more likely American River source. An expanded Los Vaqueros Reservoir design could be a solution and should be looked into.

29

3. Conclusions

EBMUD should address the problem of security and drought mitigation in a constructive and innovative way. EBMUD needs to think through solutions on how to mitigate the next drought which may be upon us in another ten years or so. The District should scale down its expensive and intrusive conservation program which is becoming increasingly unproductive and eventually will meet with resistance from its customers. EBMUD cannot expect its customers to get into the spirit of conserving when they notice continued annexations and see certain commercial users having access to significant amounts of inexpensive water for questionable purposes. The district should solve its security problems by building an alternate pipeline; that will best insure a continued safe supply of water in case of disaster. To alleviate the effects of the present drought the district should consider - if feasible - a dual delivery schedule which will satisfy most customers in all its service areas. Most of all, EBMUD needs to adopt a positive philosophy in regard to its task of delivering adequate amounts of water for customary residential uses on a stable basis at reasonable rates.



KIRK E. PETERSON
& ASSOCIATES

ARCHITECTS

JUNE 16

MR. RICHARD KOLM

ASST. CHIEF ENGINEER for PLANNING

E.B.M.U.D.

P.O. BX. 24055

OAKLAND, CA. 94623

RECEIVED

JUN 17 1981

OFFICE OF PLANNING

MR. KOLM

(1) I AM WRITING CONCERNING THE W.S.M.P. I ATTENDED THE MAY 25TH HEARING, APPLIED TO SPEAK, AND HAD TO LEAVE EARLY. I UNDERSTOOD THAT I WOULD BE ABLE TO SPEAK AT THE NEXT HEARING, AND NOW NONE IS BEING HELD!

MY OPINION IS THAT E.B.M.U.D.'S PROPOSED SOLUTION TO THE PROBLEMS OF SUPPLYING WATER TO ITS CUSTOMERS IS BASED ON A 19TH CENTURY NOTION OF RESOURCE MANAGEMENT. THE SUPPLY OF WATER IS LIMITED, OUR USE OF WATER HAS TO CHANGE. WE SIMPLY WASTE IT NOW, BECAUSE PEOPLE SUCH AS YOUR BOARD MEMBERS (NOT ALL OF THEM, OF COURSE) AND CERTAIN SEGMENTS OF THEIR CONSTITUENCY DEEM IT MORE PRUDENT OR POLITICAL TO UNDERTAKE MASSIVE 'HARD' SOLUTIONS

(CONSTRUCTION), WHEN SIMPLER 'SOFT' SOLUTIONS (CONSERVATION, GRADUATED RATE STRUCTURES, RECYCLING) ARE MORE APPROPRIATE. (6)
(10)

I BELIEVE THAT EDMUND FEELS THAT 'THE PEOPLE' WON'T STAND FOR HAVING CONSERVATION 'IMPOSED' ON THEM. HOWEVER, IT MIGHT BE USEFUL TO RECOGNIZE THAT MILLIONS OF PEOPLE IN SPAIN, ITALY AND THE SOUTH OF FRANCE LIVE VERY WELL INDEED WITHOUT USING AS MUCH WATER AS WE DO. THE S.F. CHRONICLES' IMAGE MAGAZINE RECENTLY FEATURED AN EXPENSIVE, ELEGANT HOME IN ALAMO. THE GARDEN WAS VERY DROUGHT RESISTANT, AND BEAUTIFUL. I BRING UP THIS LAST THING BECAUSE I FEEL THAT THE PROPOSED RESERVOIRS ARE REALLY DESIRABLE FOR EXPANDING SERVICE TO FUTURE COMMUNITIES LIKE BLACKHAWK RANCH, WHERE THERE IS CONSPICUOUS CONSUMPTION OF WATER. A QUALITY CALIFORNIA LIFESTYLE DOES NOT NEED TO INCLUDE RECREATING THE LUSH, MOIST GARDENS OF THE EASTERN U.S.!

I STRONGLY OPPOSE THE CONSTRUCTION OF THE BUCKHORN RESERVOIR FOR TWO REASONS: THE FIRST IS THAT

IT DESTROYS RECREATION OPPORTUNITY THAT WILL BE INCREASINGLY PRECIOUS AS THE REGION'S POPULATION GROWS IN THE FUTURE, THE SECOND IS THAT IT WILL ONLY ENCOURAGE FURTHER WASTEFUL USE OF WATER, BY CREATING THE ILLUSION OF ABUNDANCE. IT WOULD BE A SACRIFICE, ^{MADE} BY THE MANY EXISTING RATEPAYERS, AND FUTURE 'CONSUMERS' OF OPEN SPACE & PARKS, FOR THE BENEFIT OF THE FEW, MOSTLY AFFLUENT USERS WHO WILL BENEFIT FROM MORE WATER 'PROJECTS'.

(21)

I AM AN ARCHITECT, AND DO THINK DEVELOPMENT IS NOT A BAD THING. HOWEVER WATER-WASTEFUL DEVELOPMENT IS NOT GOOD. WHEN THERE WAS AN 'ENERGY CRISIS', THE STATE MANDATED CONSERVATION MATTERS IN NEW CONSTRUCTION. NO JOBS WERE LOST, NO PROJECTS WERE HALTED, AND BUILDINGS WERE BETTER. BUILDING ~~WAS~~ AND DEVELOPMENT WILL BE BETTER WITH WATER CONSERVATION.

IF 'SECURITY' OF THE SUPPLY LINES THROUGH THE DELTA IS REALLY A PROBLEM, THEN LET'S UPGRADE THE AQUADUCT, OR RE-ROUTE IT. BUT IF

(12)

E.B.M.O.D. IS SO WORRIED ABOUT THIS 'WEAK LINK' IN THE CHAIN, WHY DOESN'T IT (W) KEEP ITS LOCAL STORAGE RESERVOIRS FULL ALL THE TIME (OR ANNUALLY)?

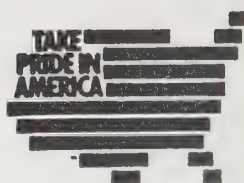
IN CONCLUSION, I WILL RE-STATE THAT I 1) STRONGLY OPPOSE NEW RESERVOIR CONSTRUCTION, 2) STRONGLY FAVOR MORE INTELLIGENT 'SOFT' SOLUTIONS 3) FIND THE DATA AND FINDINGS OF E.B.M.O.D. SLANTED AND FLAWED (RESPECTIVELY) AND 4) WILL WORK ACTIVELY TO PREVENT THE CONSTRUCTION OF THE COSTLY AND UN-NECESSARY PROJECTS E.B.M.O.D. IS PROPOSING.

MOST SINCERELY

Luh Petrum



United States Department of the Interior



BUREAU OF RECLAMATION
MID-PACIFIC REGIONAL OFFICE
2800 COTTAGE WAY
SACRAMENTO, CALIFORNIA 95825-1898

IN REPLY
REFER TO:

MP-750
120.1

JUN 16 1988

RECEIVED

JUN 17 1988

OFFICE OF PLANNING

Mr. Richard L. Kolm
Assistant Chief Engineer for Planning
East Bay Municipal Water District
P.O. Box 24055
Oakland, California 94623

Dear Mr. Kolm:

The Mid-Pacific Region of the Bureau of Reclamation (Reclamation) has reviewed the Summary, Technical Report, and Draft Environmental Impact Report (EIR) for your Proposed Water Supply Management Program. The proposed program does not directly impact existing or planned Reclamation projects or Reclamation operations. The water conservation component of the proposed program is a significant and thorough effort that we commend.

Please clarify the specific impacts and estimated costs of utilizing Sacramento River or Delta water, as this is not clear in the EIR discussion of rejected alternatives.

Reclamation's contact person for this review is Alan Solbert of our Environmental Compliance Branch (916) 978-5131.

Sincerely,

Thomas J. Aiken
Acting Regional Director

10

13

June 16, 1988

Richard L. Kolm
Assistant Chief Engineer for Planning EBMUD
P.O. Box 24055
Oakland, CA 94623

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JUN 17 1988

OFFICE OF PLANNING

Dear Mr. Kolm:

Thank you for the opportunity to comment on the Water Supply Management Program Draft Environmental Impact Report.

Proposed mitigation measures for the loss of spawning habitat for coastal rainbow trout are insufficient (p.5-95). Losses in trout populations appear unavoidable based on the information given. The significance of this rare strain of trout warrants further study. (23)

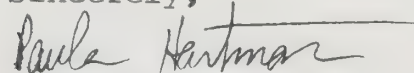
Much of the construction traffic to the Buckhorn site would travel on Redwood Road and Pinehurst Road. Both roads are subject to slides. Little mention was made as to whether increased heavy truck traffic will increase the likelihood of road failure. Furthermore, if such failure occurs, how will the traffic be rerouted? (p.5-108) (16)

In regard to growth inducing impacts, while EBMUD insists it is not a leader in encouraging growth, the argument is weak (10-4). EBMUD may be obliged to serve consumers in its district, but there is no legal obligation for EBMUD to expand the perimeters of its service area. In an area of limited water resources, water is a key limiting factor for growth. By providing more water and by providing it to a greater service area, growth is aided and even encouraged. Section 10.3 does not sufficiently address this issue. (2)

I also find it disturbing that the same document stating that salt intrusion into the Delta makes the water unsuitable for EBMUD's use fails to recognize that it is withdrawals from rivers such as the American and Mokelumne which have helped lead to this intrusion. While individual diversions seem minor, the cumulative impacts of such actions have far-reaching consequences. (19)

I oppose construction of the Buckhorn Dam. I support your efforts to improve the security of the aqueduct and to reduce water demands via water conservation and reclamation programs. (10)

Sincerely,



Paula Hartman
485 Butterfield Place
Moraga, CA 94556

Post Office Box 9478
Berkeley, California 94709
June 16, 1988

Mr. Richard L. Kolm
Asst. Chief Engineer for Planning
East Bay Municipal Utility District
P. O. Box 24055
Oakland, CA 94623

Dear Mr. Kolm,

COMMENTS AND QUESTIONS:
PROPOSED WATER SUPPLY MANAGEMENT PROGRAM

What actions, if any, does the District recommend to limit the growth in geographical area to be served from present water rights and contracts?

Please supply the numbers supporting Pages 10-1 to 10-9, inclusive, in Chapter 10, "Water Supply and Urban Growth," in the Water Supply Management Program, Draft Environmental Impact Report.

- provide sufficient detail that work can be reconciled from source information to final results.
- provide mapping sufficient to determine taps by region and by socio-economic data area.
- provide any sensitivity analyses regarding socio-economic, land, or water use factor.

Thank you for providing expanded disclosure for the Proposed Water Supply Management Program.

Sincerely,

Walter S. Hale

Walter S. Hale

RECEIVED
JUN 17 1988
OFFICE OF PLANNING

24

4

RECEIVED

JUN 16 1988

SECRETARY'S OFFICE

June 15, 1988

1301 Lark Ave

Menlo Park, Ca 94025

E.B.M.U.D.

RECEIVED

JUN 17 1988

OFFICE OF PLANNING

Bd. of Directors

P.O. Box 24053

Oakland, Ca 94623

To whom it may concern

As a resident of Menlo Park I feel a need to write this letter in opposition to the proposed Buckhorn Reservoir. In listening to the arguments at the Town Meeting I feel there are other viable water management alternatives. (10)

As a parent with two children biking Camino Pablo to their respective schools the safety factor is of great concern. (16)

Sincerely

Maureen Fitzpatrick

Marjorie Richman
426 Stonefield Place
Moraga, Ca 94556
June 15, 1988

Re: Draft EIR ~~Outline~~
EBMUD Water Supply Management
Buckhorn Project Only

Richard Kolm East Bay MUD
Oakland, California

RECEIVED

JUN 17 1988

OFFICE OF PLANNING

Dear Mr. Kolm:

As a 21 year resident at the above address, a former member and past chairperson of the Moraga Environmental Review Committee and a realtor doing business in Central Contra Costa County I would like to take this opportunity to comment on the above mentioned Draft EIR and its adequacy and sufficiency. I cannot comment on other than the Buckhorn Project because I have no knowledge of the other areas.

1. POTENTIAL IMPACTS (pages 5-21-23)

It seems to me that the earth moving operations would have LONG TERM environmental impacts association with the air quality of not only the immediate residents of the Camino Pablo and St. Mary's Road areas but also to the 1000 or so young persons who inhabit the schools in the area: St. Mary's, Mulberry Tree Pre-School, Joaquin Moraga Intermediate School and Camino Pablo Elementary School. In addition, those persons of senior citizen age will be affected too. (Moraga Royale Facility) Outside play, let alone any non-vehicular activity, will be severely limited during the four year construction phase of the project. If indeed you understand the word 'sensitive' in the term "sensitive receptors" one must believe that additional mitigations must be found.

16

2. Geology and Soils (page 5-47)

Because I am not a seismologist by profession I cannot predict the effect of a 5.1 measurement on the Richter scale on the proposed Buckhorn project. I felt such an earthquake on Sunday, JUNE 12, 1988 at 6:45 P.M. at the above address. I am disinclined to believe the information in the report that there is "no threat" or that there is not "current seismic activity" in the area. I see no mitigation measures for the residents of the area in the event of an earthquake disaster, but am relieved to notice you have considered the staff of the project.

21

3. TRAFFIC AND ACCESS (5.6, Paragraph 2, Lines 3 and 4)

I am informed by our traffic specialist in Moraga that we do not have up to date information on Camino Pablo. There were reports done for Sanders Ranch in 1982 and certainly one could extrapolate some information quickly from that. Indeed more accurate information needs to be gathered in a scientific manner. I can only say that my perception of the matter is that traffic has increased as a result of the Sanders Ranch project because I travel that Camino Pablo route rather consistently at all hours of the day to my home. We expected that increase and I believe it should be reflected in your EIR. That the construction project would significantly affect the safety of that road there is no doubt. Should there be an emergency either at the schools or with a resident in the area air transportation would have to be called in.

16

4.) AIR QUALITY P.5-148 paragraph 5.0.3 #3

Mr. Kolm, I have never seen a haul truck of the type you describe with a tarpaulin; moreover, if you would put that specification in your subcontractors' contract I submit that either the contractors would refuse to bid or you would receive a less than honest reply.

16

It is my opinion that this report is inadequate because it does not address all the issues confronting the Buckhorn project as proposed by EBMUD, i.e. safety, economic and environmental. The mitigations suggested are naive at best. For example, you suggest that the workers could car or van pool. From how many far flung areas would you suggest this mode of transportation? I am hardpressed to believe that workers for this project are segregated in their living patterns. Do you have any evidence to this effect?

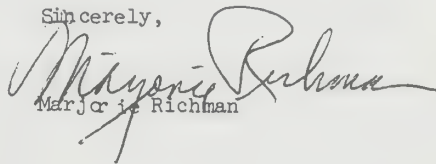
27

Indeed you have not addressed the negative ^{economic} effect that this project will have on the sale of properties in this immediate area. Most persons move to Moraga because of the quality of life i.e. the schools, the semi-rural environment and the safety of the Town. Those factors are going to be severely damaged as a result of this project. While I have already mentioned the traffic that will be impeded by the construction phase of Buckhorn, I ~~also do not mention~~ the poor air quality which will result for ~~1000~~ youngsters who have no choice but to attend school by law. A greater portion of their time spent in school in the early years will be affected by this project. Persons considering homes in this area will certainly be deterred by this project. Is EAST BAY MUNICIPAL UTILITIES DISTRICT prepared to take their customers into consideration??

16

I want to thank you in advance for your consideration of the comments in this communication; moreover, I urge the Board of EBMUD not to certify this report nor to build Buckhorn. While a Contra Costa Times news report said today that your concern is not those of the residents I like to believe that it is. I hope that I am correct.

Sincerely,


Marjorie Richman

Mary Anna McKinley
849 34th Street
Richmond, CA 94805
June 14, 1988

Richard L. Kolm
Asst. Chief Engineer for Planning
EBMUD, P.O. Box 24055
Oakland, CA 94623

RECEIVED

JUN 17 1988

OFFICE OF PLANNING

Dear Mr. Kolm:

Please provide the enclosed comments to the Directors of the East Bay Municipal Utility District Board. I intended to have presented them at the hearing conducted on June 17, 1988, but unfortunately I was not able to stay past eleven o'clock and had not yet been scheduled to speak by that time.

Thank you.

Sincerely,



Mary Anna McKinley

Due in part to their concern about potential damage to East Bay Municipal Utility District aqueducts from an earthquake on the Antioch fault, the EBMUD staff has proposed the construction of a giant dam within a few miles of the Hayward fault. This latter fault was described in a 1987 report by the California State Division of Mines and Geology as "one of the greatest hazards to lives and property in the nation"; the Antioch fault was described in the Contra Costa County Seismic Safety Element as: "the fault is not known to have moved during an historic earthquake."

21

In fact, one of the largest earthquakes to occur in California struck on the Hayward fault in 1868, with an epicenter slightly north of San Leandro. It destroyed buildings in an area from Santa Rosa to Monterey, and the 1987 Division of Mines and Geology report states: "Future earthquakes of comparable magnitude are a reasonable expectation and could occur at any time." The report further states "Historically more earthquakes greater than Magnitude 6 have occurred on the Calaveras/Hayward/Rogers Creek zone than on the adjacent segment of the San Andreas fault zone."

Right in the middle of that fault zone is where East Bay MUD's staff is recommending a reservoir be located with 145,000 acre feet of water--about as much as in all of its other reservoirs combined. The Hayward fault would lie five miles to the west, the Calaveras seven miles to the east.

Reading the Environmental Impact Report, Technical Report, and Summary which EBMUD staff prepared evokes the concern that in their desire to build Buckhorn dam, staff has not fully and objectively researched all of the ramifications. Misleading statements are common, and important potential impacts are omitted or receive little consideration. (For instance, there was no discussion of the significance of recent research indicating that large reservoirs may be capable of triggering earthquakes on near-by faults.)

27

One example of the questionable selection of data is in Table 12 of the Water Supply Management Program Summary. The only disadvantage listed for the proposed Buckhorn dam is that there would be "less convenient access for construction". The Environmental Impact Report hints at something more in the seven paragraphs it devotes to "Risk of Dam Failure":

"Construction of either dam would subject areas below the site to potential devastation in the event of dam failure. Although a very remote possibility, dam failure could occur due to a structural failure of the dam itself or its foundations. Such failure might be promoted by groundshaking induced by movements on nearby geologic faults. The dam might be overtopped by a wave produced by a landslide, perhaps earthquake-induced, into the reservoir.... Failure of the proposed Buckhorn dam would result in overtopping and probable failure of the Upper San

24

20

Leandro and Chabot dams followed by subsequent inundation of all lowlying areas of the City of San Leandro and portions of Oakland and San Lorenzo."

This "subsequent inundation" would be a serious disadvantage--it would likely result in the largest loss of life from any disaster in United States history. In 1981 the US Geological Survey calculated the number of deaths to be expected if the Upper San Leandro and the Chabot dams failed. Buckhorn was unanticipated then, so the calculation was based on the release of just one quarter of the water held in the chain of dams that would be created by the construction of Buckhorn dam. The probable potential deaths would be between 33,000 and 39,000 people, depending on the time of day when it occurred: The maximum potential deaths predicted by the Geological Survey would be 56,000. Of course, tens of thousands of others would be left homeless.

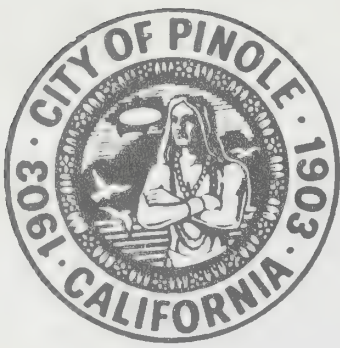
It is estimated that 2,200 died when a dam broke above Johnstown, Pennsylvania, releasing approximately 50,000 acre feet of water and producing the second largest loss of life in any disaster in U.S. history. "Subsequent inundation" hardly seems to be a sufficient description of what would happen to Oakland, San Leandro and San Lorenzo after nearly 200,000 acre feet of water swept through to the Bay, scouring the earth and killing most of the people before it. The only disadvantage to Buckhorn Dam is NOT that it has "less convenient access to construction".

There is something seriously wrong with a series of reports purporting to educate readers on the potential effects of a staff recommendation when the reports include the information that convenient access during construction should be considered as a disadvantage but omit to say that in the event of an engineering miscalculation or a severe earthquake tens of thousands of people could be killed. Moreover, there is no excuse that dam failure is unthinkable--no one ever builds a dam that is expected to fail, including the United States Bureau of Reclamation which in 1976 built Teton Dam, a dam that gave way as it was being filled with water and wiped the small town of Wilford, Idaho, off the map (as well as the top soil off of tens of thousands of acres).

East Bay MUD has been accused in recent hearings of sacrificing the interests of its present customers in order to provide more and more water for eastern development. To build a dam on Buckhorn Creek goes far beyond asking your water customers to sacrifice their lawns and shrubbery for an ever larger EBMUD district. To build that dam is to ask everyone downstream to risk their homes, their lives and their families. Buckhorn dam does not provide security when it could kill residents of San Leandro, San Lorenzo and Oakland. EBMUD staff appears either unaware or insensitive to that. I hope you are not.

The "subsequent inundation" of thousands of East Bay residents is worth more than a few paragraphs out of two hundred

pages. To accept an environmental impact report that offers no statistics on, no specific information about, no inundation maps for, and no real alternatives to a recommendation that could result in the deaths of a significant percentage of the citizens that this utility district is supposed to serve would be irresponsible and reprehensible. Please don't accept such an inadequate description of Buckhorn dam's potential consequences on public health and safety. Please don't accept this plan to build Buckhorn.



Pinole California

2131 Pear Street,

Pinole, CA 94564

(415) 724-9000

June 14, 1988

RECEIVED

JUN 17 1988

OFFICE OF PLANNING

Mr. Richard L. Kolm
Assistant Chief Engineer for Planning
EBMUD
P.O. Box 24055
Oakland, CA 94623

Dear Mr. Kolm:

This is written to provide comments on the water supply management program after review of both the technical report and the draft environmental impact report as submitted to our City by your agency.

33

With respect to the potential construction of the Buckhorn site, if the Buckhorn site is developed for reservoir purposes, what will happen with the Pinole reservoir site? Reference is made in the report that in order to preserve the watershed of the Pinole site, an additional 24 parcels encompassing 2,687 acres at an estimated cost of \$16.1 million dollars would have to be purchased. If Pinole is not developed as a reservoir, will EBMUD proceed with preservation of this watershed?

If Buckhorn is developed, what will be the status of the Pinole reservoir site irrespective of whether or not additional watershed is purchased? Does it fit into the long-range plans for EBMUD water supply management program in any way? And, if not would they be willing to agree to have Pinole expand our planning sphere of influence to include land within our Pinole Creek watershed area?

30

With respect to the Pinole Dam potentially being built, your reports indicate that some 40-80 truck trips a day would be necessary, and you imply that you will be applying for a permit to use Pinole Valley Road which has a 7-ton road weight limit. It is highly doubtful that a permit would be granted for this purpose. Further, your report makes reference to the fact that construction of the dam could involve three shifts around the clock. And given the nature of noise carrying throughout the Pinole Valley, a strong concern is expressed that the noise generated from this construction around the clock would have a tremendous detrimental effect on the peace and tranquility of residents in Pinole and Richmond in that area.

31

Further, your reports make reference to a stand of Northern California black walnut trees and some uncertainty as to whether or not they are native or imported. This should be carefully analyzed and further information provided before any final mitigation measures are determined.

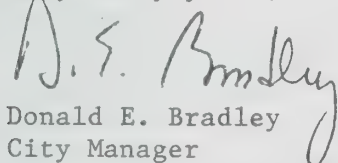
30 Your reports also make reference to construction traffic and site worker traffic coming up Pinole Valley Road and Castro Ranch Road. Again, it is highly doubtful that any permit would be granted to exceed the weight limit on Pinole Valley Road, but as importantly, we would strongly encourage EBMUD to take all measures to have Castro Ranch Road be the primary if not the exclusive route for all construction related vehicles.

30 Your reports indicate on page 5-154 that should there be a complete failure of the dam should it be built, it would involve a complete inundation of the City of Pinole within about an hour. This is an extremely important item that should be carefully weighed prior to any construction, and the City of Pinole strongly urges that all possible information be generated so as to give as much assurance as possible that the threat to life and property would be minimized to the greatest extent possible by building the dam in such a way so as to assure the least minimal possibility for dam failure.

30 Finally, a concern is mentioned in the reports as to the quality of water of the Pinole reservoir should it be built with respect to taste and odor problems. Will the water from this reservoir be used only in the West Contra Costa County area, or will there be measures taken to assure that West Contra Costa County will receive a blending of Mokolumne River water so that the effect of building this terminal reservoir will be as fairly spread as possible throughout the entire EBMUD district area. In other words, by building this terminal reservoir, there may be benefit gained by other areas of the district in terms of the quality of the water they will receive as opposed as to what the West Contra Costa County area would receive should we be the only ones to use water from this reservoir.

We appreciate the opportunity to comment on these reports and look forward to your reply.

Very truly yours,


Donald E. Bradley
City Manager

DEB:se

LAFCO

LOCAL AGENCY FORMATION COMMISSION

OF CONTRA COSTA COUNTY

McBrien Administration Building

651 Pine Street, 8th Floor, Martinez, CA 94553

Telephone (415) 646-4090

June 15, 1988

DEWEY E. MANSFIELD
EXECUTIVE OFFICER

Richard C. Kolm
Assistant Chief of Engineering
East Bay Municipal Utility District
P. O. Box 24055
Oakland, CA 94523

RECEIVED

JUN 17 1988

OFFICE OF PLANNING

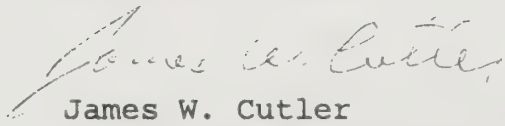
Dear Mr. Kolm:

Thank you for the opportunity to review the Water Supply Management Program Draft Environmental Impact Report. While the maintenance of an adequate water supply is of concern to LAFCO, most of the specifics discussed in the DEIR are outside the purview of LAFCO.

There are two issues which do require some response. First, is our presumption that a decision on the specifics of a new reservoir is not intended to be covered by this document but only how a reservoir fits within the Water Supply Management Plan. Additional environmental review will be undertaken if a reservoir is selected for further analysis. (23)

The second area which needs clarification is the impact of acquiring additional lands for either construction of reservoirs or for protection of watershed lands that are discussed in the EIR. Presumably if lands are to be acquired, the water sphere of influence will be requested to be modified, and the lands annexed to the District. This needs to be covered in the appropriate environmental document. (33)

Sincerely yours,


James W. Cutler
LAFCO Planning Advisor

JWC:ap

cc: LAFC Commission
Dewey E. Mansfield

Nancy Fahden, County Supervisor • Diane Longshore, Concord City Council

Susan McNulty Rainey, Public Member • Tom Torlakson, County Supervisor • Gayle B. Uilkema, Lafayette City Council

Rick Harmon, Alternate; San Ramon City Council • Don Miladinovich, Alternate; Public Member • Robert Schroder, Alternate; County Supervisor



THE CALIFORNIA NATIVE PLANT SOCIETY

DEDICATED TO THE PRESERVATION OF CALIFORNIA NATIVE FLORA

Mr. Richard L. Kolm
Assistant Chief Engineer for Planning
EBMUD
P.O. Box 24055
Oakland, CA 94623

RECEIVED

JUN 17 1988

OFFICE OF PLANNING

Dear Mr. Kolm,

Thank you for the opportunity to comment on your recent "Water Supply Management Program Draft EIR." We are concerned about the adequacy of the report on a number of issues. To start with, we feel that further study and analysis of the significance of the population of Chase oaks (Quercus x Chasei) is warranted. How often has the occurrence of this hybrid been documented? Is the occurrence of importance in the speciation of the genus Quercus? Does the population warrant preservation for the purpose of scientific study?

23

We would also like to note our agreement that the loss of the black walnut population along Pinole Creek would be a significant impact. However, the proposed mitigation of preservation of another similar stand should not be considered mitigation. Preservation of another site would still result in the loss of one-quarter of the known natural habitats for this species. "Mitigation," as defined under CEQA Guidelines, Section 15370, does not include preservation of other resources as replacement for those lost as a result of a proposed project. The policy of the California Native Plant Society is to recommend avoidance of impacts as the primary means of mitigation. Minimization of impacts to black walnut would not be possible on this project, as neither would rectifying the impact or reducing the impact over time. Off-site compensation by providing substitute resources or revegetation of a new area would also not fully compensate for this loss of an endangered plant population. In addition, the impacts on the genetic diversity of this species should be discussed and evaluated.

27

No specialized studies appear to have been conducted for the species of concern listed in the document (plants and animals also). Field methods are described as being conducted over the project area in a random manner. This type of survey is insufficient to determine the presence or absence of rare species, many of which are difficult to observe without special methodologies. In addition, the blooming period of the western leatherwood, as noted in the report, occurs outside of the field study period. Diablo rock rose and Mt. Diablo fairy lantern may also be found on the site. Additional surveys are necessary to determine with greater accuracy whether they are present or absent. Without further study, the statement that "Potential impacts to rare species are not expected to be significant or require stringent mitigation measures." on page 5-95 cannot be accurately made. If these species are found, mitigation would be difficult. These rare plants have not been studied with regard to their habitat requirements and restoration potential. Once

23



THE CALIFORNIA NATIVE PLANT SOCIETY

DEDICATED TO THE PRESERVATION OF CALIFORNIA NATIVE FLORA

again, avoidance of impacts would be the only recommended option for protection should they be present.

The cumulative impact analysis on page 11-3 is inadequate with regard to the loss of one out of four known populations of native black walnut sites. In addition, the loss of any populations of other plants of concern should be considered for their cumulative impacts. As noted above, full understanding of impacts to these species cannot be done until more complete surveys are undertaken.

25

In conclusion, we feel that surveys for a number of species should be undertaken to resolve the issue of their presence. Only then can an accurate analysis of impacts be completed. In addition, the genetic value of the Chase oaks and black walnut populations must be properly evaluated.

Mitigations that are proposed should be primarily those that avoid impacts.

We request no acceptance of the environmental impact report until the proper studies have been completed. Until that time, the environmental impacts of the proposed projects to the unique plant resources of the proposed project areas cannot be determined.

The following typographical errors are noted:

page 5-73 - 4th line from bottom - "Camino Pablo Road"
page 5-68 - 9th line from bottom - underline "Juglans hindsii")
page 5-80 - spelling of Masticophis lateralis euryxanthus
page 5-83 - 5th line from top - "Leonora Park"
page 5-90 - should be Figure 5-5
Appendix DI- Trillium chloropetalum, Symphoricarpos sp., Wyethia angustifolia, Turdus migratorius, and Taricha torosa.

Sincerely,

Patsy Allen

Patsy Allen
President
San Francisco Bay Chapter

WHITING, RUBENSTEIN & LEVY

WILLIAM F. WHITING
RONALD A. RUBENSTEIN
LESLIE A. LEVY
R. ANN FALLON
STEWART J. BEYERLE

ATTORNEYS AT LAW
HILLTOP OFFICE PARK
3220 BLUME DRIVE, SUITE 260
RICHMOND, CALIFORNIA 94806
(415) 222-6000

June 16, 1988

Mr. Richard L. Kolm
Assistant Chief Engineer for Planning
EAST BAY MUNICIPAL UTILITY DISTRICT
P.O. Box 24055
Oakland, California 94623

RECEIVED

JUN 17 1988

OFFICE OF PLANNING

Dear Mr. Kolm:

I am writing to express my very, very deep concerns regarding the proposed construction of an EBMUD reservoir in Buckhorn Canyon. My family and I reside in Moraga and live within 100 yards of Camino Pablo Road, the only source of access to Buckhorn Canyon. In addition, we have children attending Camino Pablo School and Joaquin Moraga School, both of which are located directly on Camino Pablo Road. In light of the existing alternatives, both with regard to other sites and other plans for water management, I am shocked that responsible government officials would even consider destruction of such a beautiful area in order to make a reservoir. My concerns are both short run and long run and I am further concerned about the inadequacy of the Environmental Impact Report upon which many people may rely in making their decision. Finally, while it appears to me that there are other sites which are available at a lower economic and non-economic cost, I question a policy that even calls for the construction of a reservoir at this time.

In terms of the short run, the impact of the proposed project upon the Town of Moraga and its residents would be enormous. While I acknowledge that public officials are very concerned with economic costs, I seriously question whether any realistic attention has been given to the non-economic costs involved. Camino Pablo Road is only two lanes wide (not four as noted in the EIR) and one of the Town's two elementary schools and its only junior high school are located directly on this road. As such, this two lane road bears a substantial amount of traffic and many students use it on foot or on bike to get to and from school. Both the great many trucks that will have to go up and down Camino Pablo Road each day for several years as well as construction of the pipeline lead me to believe that it is almost inevitable that serious injuries will occur. In addition, the amount of dust and noise that this project will create in an otherwise very quiet and residential area would be enormous.

Even if the project were completed, there will be many disastrous long term consequences. For one thing, we Moragans

Richard L. Kolm
June 16, 1988
Page 2

and the entire East Bay Community are most fortunate to have precious, quiet and beautiful open space nearby. This project will destroy a very substantial portion of that area. In addition, our climate is already mildly affected by the upper San Leandro Reservoir and a reservoir of this size, being both substantially larger and closer than the upper San Leandro Reservoir will almost certainly have a most severe and adverse consequence on our climate. Beyond that, I understand that there are unanswered questions regarding earthquake safety as well as the safety of the dam itself. In addition, the existence of such a large body of water is certain to cause some segments of the East Bay community to demand that it be opened up for recreational opportunities. This would permanently increase traffic in Moraga and change, in a very negative fashion, the entire nature of our community. While I understand that some of these matters have been considered and that at least some people affiliated with EBMUD have determined that these consequences are unlikely, if such persons are wrong, the consequences to those of us located near this reservoir would be disastrous. For example, I have been advised by an individual who is both informed and responsible that he believes, based upon his own technical expertise, that this reservoir has the potential for changing the temperature in Moraga by as much as 10° and creating many more days of fog. It does not seem to me that such a reservoir should be built as long as there is any possibility, however slight, that such a project could seriously and adversely change the entire climate of a community. (22) (21) (19) (19)

I also question your policy of coping with the current water situation by proposing and building more reservoirs. There are many other alternatives which should be pursued. It seems to me that the creation of more water capacity will simply lead to more development and thus continue what has thus far been a vicious circle. It is time to come to grips with the facts that water is no longer an unlimited resource and that the water which we have must be managed and allocated carefully. Continuous and never ending growth cannot be tolerated and the Board should direct itself toward water management alternatives rather than costly and destructive projects. (16)

Finally, I am most concerned about the fact that many people participating in the decision making process will be relying upon the Environmental Impact Report. As was made apparent at a public meeting in Moraga last week, that report is shockingly incomplete or inadequate in many respects. For example only, as (19)

Richard L. Kolm
June 16, 1988
Page 3

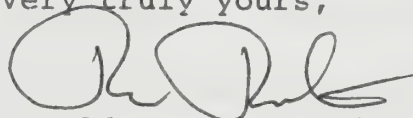
noted above, the report proceeds on the basis that Camino Pablo Road, the road upon which all of the heavy equipment and trucks must pass is a four lane road. In fact it is only a two lane road and it is under this road that the massive pipeline is proposed to be built. There are many other instances of inadequacy as I am sure your representatives who attended that meeting can attest.

16

In conclusion, I know it is your function to carefully consider costs in analyzing any such project. In the case of Buckhorn Reservoir, I fear that the only costs that have been adequately considered are the financial ones. In this case, the nonfinancial costs, both actual and potential, are absolutely enormous and, to my thinking, the non-economic costs and destructive consequences of the project substantially outweigh the project.

I trust you will carefully review this letter and hope that you conclude, as I have, that now is not the time and Buckhorn Canyon is not the place for such a project.

Very truly yours,



Ronald A. Rubenstein

RAR:jw

cc: Mr. Sanford M. Skaggs
Mr. Kenneth Kofman
Ms. Helen Burke
Mr. Jack Hill
Mr. Walter R. McLean
Mr. Kenneth H. Simmons
Ms. Mary Warren

June 14, 1988

Mr. Richard L. Kolm
Asst. Chief Engineer for Planning
EBMUD
P.O. Box 24055
Oakland, California 94623

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JUN 17 1988

OFFICE OF PLANNING

Subject: Water Supply Management Program Draft EIR

Dear Mr. Kolm:

I have reviewed the Water Supply Management Program Draft EIR and would like to offer the following comments on the Vegetation and Wildlife section as it pertains to the proposed Buckhorn Reservoir site.

The Setting section is based on a limited field survey (Spring, Summer, only a few days) which fails to adequately determine the presence and status of the vegetation and wildlife resources of the reservoir site and surrounding area. Field surveys in all other seasons are necessary and sufficient time allocated to gather the necessary data. The necessary level of effort should be similar to the study conducted by the Department of Fish and

Game for the Los Vaqueros site titled "Los Vaqueros Project - Fish and Wildlife Impacts" published in June 1983.

The report understates the significance of the loss of 1,124 acres of habitat. The importance of this loss is increased by the isolation of the site. Wildlife species such as golden eagle, bobcat, and mountain lion which are less tolerant of human disturbance will use isolated areas such as the Buckhorn site more frequently than similar habitat adjacent to developed areas. The loss of more than 1,000 acres of isolated, undisturbed habitat should be identified as a significant impact of the project.

The lack of sufficient data to determine the vegetation and wildlife resources of the Buckhorn site results in an inability to accurately project the impacts of inundating this area. What early (February, March) and late season (August, September) plants are present and blooming?; How extensively do nesting golden eagles use this area and in what seasons?; do mountains lions make regular use of this area? These questions and many more cannot be answered due to the lack of data. As a result the significance of these impacts cannot be determined.

The report notes the possible presence of

red-legged frog, a federal candidate 2 species for possible listing as either threatened or endangered. It goes on to say they were not observed during the limited field surveys. Red-legged frogs are present in the Moraga area (Preston Ranch property) and the Buckhorn site should be intensively surveyed at the proper seasons for their presence.

The impacts section concentrates almost exclusively on species which are either formally listed or are of concern to the wildlife agencies. This approach ignores the great majority of vegetation and wildlife species which are present and will be impacted by the project. A species or group of species can be significantly impacted even if they have no formal listed status. This should be addressed in the EIS. Examples of such potential impacts are given above. These as well as others should be evaluated.

The vague reference to potentially enhancing other watershed lands to improve habitat values is not sufficient mitigation to offset the loss of 1,060 acres of undisturbed habitat. Mitigation should also include the preservation of additional watershed land not currently owned by EBMUD and within the watershed of Upper San Leandro reservoir. A good example is the Indian creek watershed. T

valley, a portion of which is already owned by EBMUD, is largely undeveloped and could be acquired for this purpose. The EIR already proposes improving the culvert beneath Canyon Road to allow spawning trout access to this creek. Urban development of the valley would likely degrade the creek and eliminate any benefit from the proposed mitigation measure. EBMUD ownership of the creek's watershed would provide such protection for spawning trout as well as other wildlife, including a resident pair of golden eagles.

(22) If EBMUD's Wildlife Management Plan is going to be used as a mitigation measure it should be included, at least as a technical appendix, in the report to allow reviewers the opportunity to determine the adequacy of the proposed habitat enhancement measures.

The report properly identifies the presence of riparian habitat and the need to mitigate for its loss. (27) Unfortunately no mitigation plan has been developed and no mitigation site selected. As a result the adequacy of mitigation for the loss of riparian habitat cannot be evaluated. A riparian mitigation site should be selected and a plan developed for evaluation in the EIR prior to its

certification. This should include determining whether the Corps of Engineers has 404 jurisdiction and the Department of Fish and Game has 1603 jurisdiction.

(27) The report suggests mitigating ^{impacts to} for some species of concern but not others. A general mitigation measure should be added which states that mitigation will be provided for all such species which are impacted by the project. An example would be providing ~~nesting~~ breeding ponds for red-legged frogs and introducing these frogs to the ponds if they are found within the study area.

I appreciate the opportunity to comment on this report and request that I receive a copy of the Response to Comments so that I may review comments made by others and the responses to all comments.

Sincerely,

Malcolm J. Sproul

Malcolm J. Sproul

45 Williams Dr.

Moraga, Calif. 94556

6/15/88

Dear Mr. Kolm,

We are opposed to the
Buckhorn Reservoir.
Maraga will be inconven-
ienced, placed in
danger of earthquakes
and our children will
be endangered by
increased traffic and
pollution.

Please find an
alternative to Buckhorn.
Let's go with Los Vogueros.

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JUN 17 1988

OFFICE OF PLANNING

Concerned residents,
J. Mahoney
Margaret T. Mahoney
15 Lisa Ln
Maraga, Ca 94556



moraga school district

1540 School Street • P.O. Box 158 • Moraga, CA 94556 • (415) 376-5943
John G. Cooley, Ph.D., Superintendent

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JUN 16 1988

SECRETARY'S OFFICE

June 15, 1988

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JUN 17 1988

OFFICE OF PLANNING

Mr. Sanford M. Skaggs
President
Board of Directors, EBMUD
P.O. Box 24055
Oakland, CA 94623

Dear Mr. Skaggs:

The members of the Moraga School District Governing Board have asked me to communicate some of their concerns regarding possible effects of the Buckhorn Canyon Reservoir project on our schools.

These concerns are:


1. NOISE
Camino Pablo Elementary School (460 students) and Joaquin Moraga Intermediate School (570 students) are located on Camino Pablo. Noise from increased traffic and construction might create problems at each of these schools. (16)
2. SCHOOL HOURS
The EIR states that the schools are used from 7:30 a.m. until 3:00 p.m. In addition to this use we have a child care program at Camino Pablo School which operates from 7:00 a.m. to 6:00 p.m. Also both school sites are used by the community after school hours. These uses include meetings of community groups such as the Town Council and extensive use for sports programs for children and adults. The play fields at both schools are used year round by local sports associations. (16)
3. SAFETY
Although the EIR states that all truck traffic would not be routed along Camino Pablo, it seems reasonable to expect a significant increase in truck and auto traffic on this road during the four to five year construction period. An increase in traffic would create concerns for student safety as they arrive at and depart from school. (16)

Pipeline construction raises safety concerns for children riding or walking to and from school and might further complicate an already difficult traffic situation. Construction might also hinder emergency vehicle access to our schools.

16

The Governing Board appreciates the complexity of the decision you must make and recognizes that you provide a vital service in supplying us all with a sufficient quantity of good quality water. Your consideration of our concerns will be appreciated.

Sincerely,


John Cooley
Superintendent

Note: Mr. Robert Merritt has abstained from taking part in discussion of this issue.

JC/mc

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JUN 16 1988
SECRETARY'S OFFICE

1982 A Ascot Dr.
Monrovia, CA. 94552
June 14, 1988

Gentlemen:

I am writing to object strongly to the proposed Buckhorn reservoir. As a Monrovia resident, I am concerned about the traffic on our narrow streets, not only after the completion of such a project, but during the construction.

16

I urge you to consider other options. For instance, it has been suggested that you develop Los Vaqueros reservoir instead. Please proceed with this plan.

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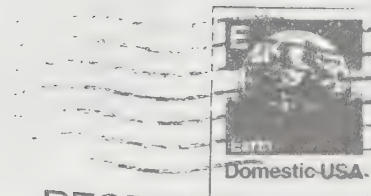
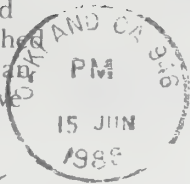
JUN 17 1988

OFFICE OF PLANNING

Sincerely,

E. Prather

This magnificent oak and bay studded valley in the heart of EBMUD watershed land is threatened by construction of an unnecessary reservoir. Citizen initiative can prevent the loss of this urban wilderness on the edges of Oakland, Moraga, and Danville. 6-13-88



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JUN 16 1988

SECRETARY'S OFFICE

EBMUD
Board of Directors
PO Box 24055
Oakland, CA 94623

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JUN 17 1988

OFFICE OF PLANNING

9

Dear Sir,
We are sending this to protest your plans to develop Buckhorn reservoir. After reviewing the EIR, we're convinced that there are better alternatives. Certainly, Los Vaqueros would have significantly less adverse impact on existing population than would Buckhorn.

Sincerely, William R Rees
Heidi T. Rees
102 David DR
Moraga, Ca

You can help by joining
the Buckhorn Canyon Preservation Council (B.C.P.C.)
c/o S.F. Bay Chapter Sierra Club
6014 College Avenue
Oakland, California 94618
415/653-6127

Photo: Bob Walker

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Buckhorn Canyon, Contra Costa County, California



BAY AREA AIR QUALITY MANAGEMENT DISTRICT

ALAMEDA COUNTY
Edward R. Campbell
Shirley J. Campbell
Chuck Corica
Frank H. Ogawa

CONTRA COSTA COUNTY
Paul L. Cooper
Sunne Wright McPeak

MARIN COUNTY
Al Aramburu
(Chairperson)

NAPA COUNTY
Harold I. Moskowitz

SAN FRANCISCO COUNTY
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Jim Gonzalez

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Gus J. Nicolopoulos
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SANTA CLARA COUNTY
Rod Diridon
Ralph P. Doetsch, Sr.
(Vice-Chairperson)
Roberta H. Hughan
Susanne Wilson
(Secretary)

SOLANO COUNTY
Osby Davis

SONOMA COUNTY
Helen B. Rudee

June 15, 1988

East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

Attention: Richard L. Kolm
Assistant Chief Engineer for Planning

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JUN 17 1988

OFFICE OF PLANNING

Dear Mr. Kolm:

We have reviewed the Technical Report and Draft EIR for EBMUD's Water Supply Management Program (WSMP). The WSMP is intended to ensure adequate water quantity and quality for communities within EBMUD Service Area boundaries. The proposed WSMP consists of: construction of an additional storage reservoir, levee and aqueduct improvements in the Delta, water conservation measures, water reclamation activities, and measures to protect water quality. We have the following comments regarding the Technical Report and DEIR.

As noted in the DEIR, the Bay Area failed to attain ambient air quality standards for ozone and carbon monoxide (CO) by the 1987 deadline of the U.S. Clean Air Act. Because motor vehicles are a major source of CO and ozone precursors, urban growth and associated increases in motor vehicle use have contributed to the region's air quality problem. The deteriorating traffic conditions discussed on pages 10-10 to 10-12 of the DEIR indicate that motor vehicles will continue to be a problem (with respect to air quality) in the future. We are concerned that continued rapid urban growth, particularly in outlying areas, could make the task of attaining air quality standards even more difficult.

We understand EBMUD's position that it is not a land use planning agency. We agree that market forces and local government policies greatly influence community growth. Market forces and local land use policy do not operate in a vacuum, however. In a semi-arid region such as the Bay Area, the availability of water clearly influences local governments' land use decisions. We are concerned that if the WSMP is implemented, a major constraint to development will have been removed and some local governments may choose to amend their general plans to allow more extensive development.

We understand that the water demand assumed in the WSMP is based, in part, on ABAG projections. These in turn are based on local policies and general plans. However, general plans are subject to change. While the WSMP is intended to provide additional water supply in the event of an emergency, it appears possible that local governments might view the additional water as available for further growth rather than as an emergency

Mr. Richard L. Kolm
East Bay Municipal Utility District
June 15, 1988
Page Two

reserve. Such growth could exacerbate already difficult traffic and air quality problems. We strongly urge EBMUD to adopt measures to prevent local governments from using any intended emergency water supply as a resource for additional growth. (2)

If you have any questions, please contact Jean Roggenkamp, the Planner in our office.

Sincerely,



Milton Feldstein
Air Pollution Control Officer

MF:HH:mt

cc: J. Pederson, CARB
S. Germain, ABAG
J. Georgevich, MTC
C. Cosulich, Caltrans

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JUN 16 1988

RESOURCES PLANNING DIVISION

Christine K. Holmstrom
1 Las Moradas Circle
San Pablo, CA 94806

June 14, 1988

Richard L. Koln
Assistant Chief Engineer for Planning
EBMUD, P.O. Box 24055
Oakland, CA 94623

Re: Comments on Water Supply Management Program Summary

Dear Mr. Koln:

I am writing to express my opposition to water banking as described in the WSMP Summary. Construction of new terminal reservoirs, such as the proposed Buckhorn Reservoir, is an expensive, destructive solution to projected water needs and security considerations (protection against floods and earthquakes).

I believe that further study of the additional and theoretical measures listed on page 18 of the Summary is merited. Mandatory installation of water saving toilets for all future residential developments, landscape rebates (including a possible tax credit for conversion of existing landscaping and water devices to drought resistant species and efficient watering systems) should be considered. EBMUD consumers will support water conservation if provided with proper incentives, viable options and sufficient education.

I encourage you to explore these alternatives rather than destroy a natural habitat to construct another costly reservoir.

Sincerely,


Christine K. Holmstrom



THE ECOLOGY MOVEMENT
300 MORAGA RD., MORAGA, CA.
94556

June 15, 1988

Richard L. Kolm
Assistant Chief Engineer for Planning
E.B.M.U.D.
P.O. Box 24055
Oakland, CA 94623

Dear Sir:

After considerable discussion, consultation, and perusal of the Environmental Impact Report, and attendance at public hearings, we have decided that the Buckhorn Reservoir Segment of the Water Supply Management Plan is not worthwhile.

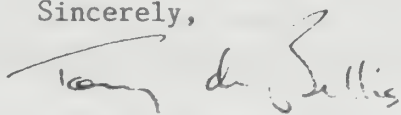
Our Reasons:

- a) Since the East Bay Municipal Utility District cannot now supply water to all of its rate payers in drought years, and since this reservoir will foster growth in the Danville area, this reservoir will cause diminished water service to all rate payers in the future. (24)
- b) The reservoir is being planned to alleviate drought years, whereas as a matter of fact the amount of water evaporating off the top during the average ten normal years will far exceed the amount stored during the sub-normal years. (19)
- c) The E.I.R. grossly and negligently ignores the seismic and weather modifications that would result from the construction. Within an approximate 100 mile radius we can expect at least three times as many earthquakes, and at least twice the number of dangerous "tulle fog" days as we presently have. (19)

We applaud the fine, high quality, mountain water that E.B.M.U.D. has delivered to us, and strongly suggest that conservation of this vital resource is the answer to the problem, not ill conceived, destructive, and expensive boondoggles. We firmly believe that those board members who conceived this plan will be voted out in the next election thus preventing future boondoggles. (21)

Sincerely,


Dan Malecki
Adv. to Earth


Tony de Bellis (Geology & Physics Instructor)

cc: Walter Hoy
Joseph E. Anthony

1327 Josephine St.
Berkeley, CA 94703
June 16, 1988

Richard L. Kolm
Assistant Chief Engineer
EBMUD
P.O. Box 24055
Oakland, CA 94623

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JUN 17 1988

OFFICE OF PLANNING

Dear Richard Kolm:

As a member of the Citizens Advisory Committee on the Water Action Plan, I read the Draft EIR and supporting documents of the Water Supply Management Program with great interest, and I appreciate this opportunity to make a few comments on it. There are a number of points that the DEIR does not adequately consider.

1) A key point not adequately addressed is the growth-inducing impacts of the proposed projects. Section 2.4 gives only a general discussion, ending with the observation that if construction did not take place, growth could be limited. The converse is not discussed.

Nor does Section 10 on Water Supply and Urban Growth address this issue. It discusses the land use, traffic, and air quality impacts of growth in the District's service area, but does not discuss the growth-inducing impacts of the proposed alternatives themselves. Specifically, there is no discussion of growth-inducing impacts of the alternatives to reduce security risk listed on Table 4 (p. 9) of the Summary, nor those to reduce water shortages on Table 7 (p. 16) of the Summary.

Clearly, several of these alternatives have substantial potential to induce growth, especially a new aqueduct across the Delta (unless it simply replaces the existing aqueducts) and a new terminal reservoir. The DEIR should address the growth-inducing impacts of each terminal storage alternative listed on Table 12 (p. 26) of the Summary. Without these discussions, the DEIR is incomplete.

2) Nor does the DEIR address impacts of additional water diversion on the San Francisco Bay/Delta ecosystem. Any project that includes elements leading to implementation of the USBR contract has potential impacts on this ecosystem that must be considered in a complete DEIR.

3) Another point the DEIR does not address is limiting hookups, especially in the dry areas east of the Berkeley Hills, as an alternative management strategy. This seems to me to be the most fundamental question that must be addressed by any long range water supply management program. Certainly the questions listed for Board decision

at the end of the Summary should include: Should EBMUD continue to approve requests for service in areas not presently served by the District or should the existing water supply be managed for present customers? The Minority Statement of the Citizens Advisory Committee on the Water Action Plan stated "that it may be necessary for the District not to accede to all requests for service outside the present ultimate service district". The DEIR should address this point.

As long as EBMUD continues to say that it will meet all requests for service, communities will not be helped to recognize water as a finite resource. The opening pages of Section 10.2 state that "It is communities that decide where and how much growth is to occur...". However, "the community" is not some entity separate from service agencies, telling these agencies what to do; the service agencies are a part of the community and thus have a responsibility to help educate the community.

2

If annexation and expansion continue, no amount of conservation, rationing, reuse, banking or construction will lessen the water shortages during future droughts. It is time that EBMUD helps developers, politicians and ordinary citizens understand this reality. I urge the EBMUD Board to take the precedent-setting step of acknowledging that the water supply in California is a finite and limited resource. The first step in this direction is to recognize this fact in the DEIR and address meaningful alternatives to expansion.

Sincerely,

A handwritten signature in cursive script that reads "Doris Sloan". The signature is fluid and extends across the width of the text area.

Doris Sloan

McDONOUGH, HOLLAND & ALLEN
A PROFESSIONAL CORPORATION
ATTORNEYS

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OAKLAND OFFICE
P. O. BOX 3448
OAKLAND, CALIFORNIA 94609
(415) 547-0106

STUART L. SOMACH

June 17, 1988

HAND DELIVERED

Richard L. Kolm
Asst. Chief Engineer
for Planning
East Bay Municipal
Utility District
2127 Adeline Street
Oakland, CA 94623

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JUN 17 1988

OFFICE OF PLANNING

Re: Comments Regarding Draft Environmental Impact
Report: Water Supply Management Program

Dear Mr. Kolm:

This firm represents the County of Sacramento ("County") as Special Legal Counsel. The County has thoroughly reviewed the Draft Environmental Impact Report ("DEIR") circulated by your agency for a "Water Supply Management Program" ("WSMP"). This letter provides the County's comments on the DEIR. In summary, in the County's view, there are numerous, obvious deficiencies in the DEIR; and the County believes that the DEIR, as written, does not comply with the requirements of the California Environmental Quality Act ("CEQA"). Following are more specific comments which support this general position.

1. The Absence of Appropriate Discussion of the United States Bureau of Reclamation Water Supply Contract

A major deficiency in the DEIR and accompanying Technical Report (sometimes "T.R.") is the absence of any environmental review of water supply alternatives to the East Bay Municipal Utility District's ("EBMUD") United States Bureau of Reclamation ("USBR") Water Supply Contract, as that contract is currently written. The District, moreover, creates confusion in this regard, sometimes discussing water supply alternatives to the WSMP, (DEIR Chapter 4) and sometimes discussing alternatives to the USBR contract (T.R. III-39).

On page III-39 of the Technical Report, the District contends that "[a] review of other suggested sources which were considered before and since that decision [to seek American River water] shows that there are no alternatives to the American River." To the extent that the foregoing assertion is intended to apply to EBMUD's alternatives other than the existing USBR contract water supply, the DEIR and the Technical Report themselves contradict the assertion. To the extent that the quoted assertion is meant to apply to alternatives to diversion under the existing USBR contract, the DEIR and Technical Report do not provide legally or technically adequate discussion of the analysis which supports the conclusion. In any event, as discussed immediately below, the analyses of water supply alternatives, wherever and in whatever context they appear, do not satisfy the mandates of CEQA.

14

2. The Inadequate Discussion of Alternatives

The DEIR and the Technical Report fail to justify the conclusion that alternatives to the American River diversion (or alternatives to the WSMP involving additional water supply other than the existing USBR contract) are infeasible. In this regard, the County notes that the previously-quoted statement with respect to alternatives to the lower American River contains no discussion of a Sacramento River diversion alternative. That omission is glaring, as are other discussions of alternatives that omit the Sacramento River as a source of water supply. There is no question that the Sacramento River represents a feasible alternative to the American River and possibly to other alternatives included in the WSMP. (Indeed, the State Water Resources Control Board has found that a Sacramento River diversion is the "most feasible" alternative to the diversion from the Folsom-South Canal.) An adequate EIR must analyze the environmental impacts (including cumulative impacts) of the USBR contract including the potential for alternative diversion sites and facilities.

14

The DEIR and Technical Report are also deficient with respect to Delta diversion alternatives. While the quality of raw water in the Delta may be less than that obtained from the Mokelumne supply, information contained in the Technical Report demonstrates that the Delta supply can be treated through the addition of facilities. This indicates that a Delta diversion alternative is technically feasible.

11

The County disagrees with EBMUD's characterization of water quality in the Delta. The documents imply that the quality of Delta water is particularly degraded during droughts when sea water intrusion occurs. Delta water quality is currently maintained at standards required by the State Water Resources Control Board; the standards are adequate to protect municipal diversion from the Delta, even during drought. The Department of Water Resources and the USBR have an incumbent responsibility to meet these standards, and the DEIR and Technical Report mislead the reader to believe that there is uncertainty as to the quality of water which will be available from the Delta. It is reasonable to assume that water quality in the Delta will be maintained at a level adequate to allow the diversion of water for municipal purposes by the Contra Costa County Water District and the State Water Contractors (entities that do not have the luxury of mixing Delta water with water from the Mokelumne) and EBMUD.

Further, the DEIR and Technical Report appear to misrepresent the results which are provided in the referenced reports of the U.S. Corps of Engineers. Figure II-9 of the Technical Report apparently purports to present an indication of the salinity which will occur within the Delta as a result of Delta island flooding. The studies which are referenced were performed on the San Francisco Bay-Delta Model located in Sausalito to investigate the effects upon Delta salinity caused by the flooding and ultimate abandonment of certain Delta islands. The studies provided results under a steady state condition; that is, for each test, a Delta island or group of Delta islands was flooded and the salinity in the Delta was then allowed to come into equilibrium with established outflow conditions. Study results indicated the change in Delta salinity under a common set of Delta outflow and export conditions with a differing Delta hydraulic configuration. The results were not represented to investigate the effect upon salinity within the Delta during the time of actual Delta island flooding.

The Corps of Engineers study indicated that under a common set of Delta outflow and export conditions certain individual flooded Delta islands, and groupings of Delta islands, will cause an increase in Delta salinity. Conclusions developed from the study results indicate that for the 19 Delta island test the trend of higher salinity should only be considered, rather than the quantitative impact identified in the report. This qualification was reasoned upon the modeling process problems which occurred.

The DEIR and Technical Report make other errors with respect to "Delta security" considerations. The documents refer to the historic and projected reoccurrence of Delta island flooding caused by overtopping or stability failure. In consideration of the projected frequency of Delta island failures, and the resultant risk of sea water intrusion, the District should recognize that overtopping failures historically have been associated with high water conditions within the Delta. During these periods of high water, Delta outflow is normally adequate to offset salinity intrusion caused by an island flooding. Therefore, Delta island flooding during periods of high Delta outflow would cause little, if any, detrimental impact to Delta salinity at the time of the flooding event. (11)

The DEIR and Technical Report's estimates for the cost of water quality facilities required to treat Delta or American River water appear to be based on the incremental cost of treating those sources of supply. That estimate includes the full cost of a new treatment facility. Several statements within the Technical Report and DEIR imply that EBMUD expects that new drinking water standards will include a new THMFP standard. EBMUD may be required to provide new facilities to treat all of its raw water supplies since the quality of the source waters of the American River and Mokelumne River supplies is currently at the upper limit of the estimated requirement. Since the USBR's water supply is viewed by EBMUD to be supplemental to its other supplies, and not intended for purposes other than firming those supplies, the utilization of the Bureau water supply may only occur during years when there is a shortage within EBMUD's other supplies. During such periods, adequate capacity in EBMUD's treatment plants should exist since the supply from EBMUD's other water sources is limited. This circumstance of being required to treat all raw water, in addition to the coordinated operation of the EBMUD water supplies, indicates that the cost of the water treatment facilities is an expense that will be required of EBMUD whether or not the USBR water supply is taken from a location other than the Folsom-South Canal. (11)

In short, the Report and DEIR need to better address, on an overall, common, integrated basis, the costs associated with treating EBMUD's current and future potential water supplies. As with the Sacramento River, any environmental impacts of a Delta (or other potential water source) diversion must be thoroughly analyzed, and compared and contrasted to American River (or WSMP, as the case may be) impacts. (11)

Overall, EBMUD has not addressed alternatives which use the Bureau water supply. Further, its rationale for not investigating those alternatives is inadequate. The information provided by the Report regarding a USBR water supply from a location other than the American River is contradictory to EBMUD's current and historic actions, and is not presented on a basis of how such a water source can be integrated into the long range water management program of EBMUD. Amendment to EBMUD's contract with the USBR may be required for EBMUD to receive its Bureau water supply from a point different than the Folsom-South Canal. But such amendment can occur, and in fact, such an event occurred when EBMUD diverted water from the Delta during the drought of 1976-77, and a similar amendment currently is under consideration for diversion from the Delta this year.

The DEIR repeatedly rejects alternatives because the alternatives do not satisfy an EBMUD "goal" or "policy". Nothing could be more indicative of the inadequacy of environmental review required by CEQA than this casual dismissal of viable, feasible alternatives. It bears noting in passing that the DEIR contains inconsistent descriptions of the District's goals with respect to the quality of raw water supply.

The following is a list of alternatives that require comprehensive review in comparison to those alternatives indicated in the Technical Report and the DEIR:

1. USBR Water Supply: The taking of the USBR water supply from the (a) Folsom-South Canal at Grant Line Road, (b) extension of the Folsom-South Canal to the Mokelumne Aqueduct, (c) Sacramento River, and (d) Delta, either at EBMUD's site at Bixler or at other locations in coordination with the State Water Project or the Bureau.
2. Woodbridge Irrigation District/Downstream Camanche Users: Currently, EBMUD is pursuing a pumpback operation to Camanche Reservoir from the Delta at Bixler. This proposal is intended to provide a Delta water supply to the users below Camanche Reservoir, thus reducing the releases required from Pardee Reservoir to meet those needs. This alternative would provide additional firm water yield to the Mokelumne River supply.

3. Mokelumne Storage: The DEIR and Technical Report have summarily dismissed the potential of increasing the firm water yield of EBMUD through the development of additional storage facilities on the Mokelumne River. To the extent that prior agreements limit EBMUD's right to divert additional water from the Mokelumne River, development of additional terminal reservoirs and the use of such reservoirs for drought protection is no different than developing storage facilities on the Mokelumne River for the same purpose. (13)
3. EBMUD May Not "Piecemeal" Its Environmental Review of Projects

Most of the proceeding discussion deal with the environmental analysis of contemplated actions and alternatives. Another, related, fundamental defect in the DEIR is the attempt to "piecemeal" the environmental analysis of the District's intention to divert American River water. The discussion of alternatives to the American River diversion is an example. Another, more subtle example, relates to terminal storage, an "element" of the WSMP. If EBMUD constructs additional terminal storage, additional water will be required from some source to fill the reservoir (and refill it after use). The DEIR and Technical Report seemingly are written to make it appear that the reservoir will not require any increase in diversion, a notion that is contrary to the stated purpose of EBMUD "goals" for storage and additional supply. There will be reductions in stream or river flow at the source of the supply which satisfies the increase in water deliveries, and environmental impacts are likely to result. (14)

Thus, with respect to terminal storage, the "ultimate project" has not been addressed. And, if the ultimate project includes or may include diversions from the American River or another source, or additional diversions from a current source, CEQA requires full review environmental review of those project components.

4. Miscellaneous Defects in the DEIR

The DEIR is defective in several other material respects, discussed briefly below.

The analysis of "growth-inducing" impacts is circular, and inadequate. The DEIR does not adequately distinguish between "growth", "projected growth", "planned growth", and "approved growth". It is unclear whether additional water supply will or may result in growth, the environmental impacts of which have not been thoroughly addressed. Discussions of growth projections should identify the assumptions inherent in the projections. (24)

Regarding the subject of water supply security, the District establishes in the Technical Report a goal of protecting against a 13 month outage of the Mokelumne Aqueduct. This goal is apparently based on estimated time requirements for the repair of a certain level of damage to the Mokelumne Aqueduct. There can be no certainty as to the type of damage that may occur to the Mokelumne Aqueduct in the future, and the stated goal is arbitrary. EBMUD has not provided adequate information regarding the assumptions that led to the establishment of the 13-month goal. To the extent that the goal is overly conservative, the "security" selection criteria for an additional water supply or additional terminal storage are too restrictive. (7)

The DEIR inconsistently applies criteria to reject or carry forward alternatives into the next level of analysis. For example, the Pinole Reservoir Project was rejected (T.R., p. V-25) because it did not "provide adequate storage to meet the security and supply objectives", yet it was carried forward and analyzed in detail throughout the DEIR. In contrast, most alternatives rejected in Chapter 4 of the DEIR received a superficial environmental review at best, but there is no indication that these alternatives are infeasible. (29)

The goals, objectives, and criteria used to evaluate and reject alternatives are intermixed and appear to change throughout the Report and DEIR. CEQA guidelines require that the selection and discussion of alternatives foster informed decision-making. As written, the selection and discussion of alternatives is very unclear with respect to the specific conditions or reasons any alternatives do not meet EBMUD security, supply, or health and safety requirements. And, because the analysis was limited to determining "acceptable" and "less advantageous" (p. 4-1) alternatives, the authors apparently were not able to assess adequately the feasibility of the program or reservoir alternatives.

The environmentally superior alternative as required under CEQA guidelines (§ 15126(d)(2)) is not identified, apparently because the relative environmental merits of the program alternatives were not adequately assessed. (13)

The footnote on projected water demand on page 3-5 for different conservation programs is inconsistent with the statements made in the text on page 3-4, paragraph 2. For clarification, reconciliation should be made between "current" and "proposed" programs.

It is unclear why an 80,000 AF reservoir at the Buckhorn site was considered when a reservoir of such size will not meet the apparent selection criteria for reservoir capacity. The selection criteria should be clarified. Also, the DEIR does not address worst-case impacts that could be expected with the maximum possible development at each of the alternative reservoir sites. Similarly, it is unclear why the Pinole Reservoir (44,000 AF) was considered in detail if it did not meet EBMUD goals, objectives, or requirements. (29)

A significant shortcoming of EBMUD's selection criteria is the application of rejection criteria to alternatives only on an individual basis. This methodology precludes a fair comparison of a combination of alternatives which may satisfy program requirements.

Table 5-5 fails to include Los Vaqueros impacts. Comparison between reservoir alternatives would be greatly enhanced if the Los Vaqueros information is added to the table. (32)

The County appreciates the opportunity to comment upon this matter.

Very truly yours,



Stuart L. Somach
Attorney

cc: L. B. Elam, Esq.
J. P. Alessandri

3069 Oakraider Drive
Alamo, Ca. 94507
June 14, 1988

Richard Kolm
Asst. Chief Engineer for Planning
EBMUD, P.O. Box 24055
Oakland, CA. 94623

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JUN 17 1988

OFFICE OF PLANNING

Dear Mr. Kolm,

I have studied the Water Supply Management Program Summary and the EIR and would like to give a few comments. Taking words from your text on its first page, the summary says the district "has provided a dependable supply of high quality water to meet the needs of the growing population in the East Bay service area." That is exactly what we want from our district. I just question that the plan can do that as proposed. Repeatedly, the summary analyzes whether a 25% or 39% rationing plan for times of low supply would be appropriate. Repeatedly the summary tells of threats to the system through foreseeable drought, damage to pipelines with flooding or earthquakes in the Delta that would result in severe water rationing.

Mr. Kolm the District seems to have drawn the conclusion from the drought we experienced in 1977 and our great community spirit in dealing with that crisis that we are capable of great amounts of fluctuation in water needs. This is ridiculous. The people of the warmer communities in the district suffered great financial loss during that drought. We are now in the midst of another crisis. This is NOT what we find acceptable for planning purposes. Throw out the 25% and 39% rationing. There is no equitable way to ration water when climatic differences create such diverse needs.

This plan will take years to impliment. By that time we will be well on our way to rationing in normal years when we plan for the lower levels of water needs. We want to plan for a system that can deliver a "dependable supply of high quality water to meet the needs of the growing population in the East Bay service area."

The plan focuses on keeping water quality high and that is an admirable stance for the District to pursue. The plan does not adequately deal with delivering the water necessary to meet the needs of the growing population. If we are to have a strong system the water district must get out of the business of rationing except in times of UNFORSEEABLE circumstances! It is difficult to look into a crystal ball and predict exactly the needs of the District in 30 years, however, you have at your disposal the data that would correctly guide you to plan for a

sound system.

We elect our board from 7 wards, but your statistics show that there are 7 distinct regions of differing water usage, (which do not necessarily cover the same area as the 7 wards.) It is not the function of the District to get into the nebulous area of setting values, determining which water usage is legitimate or not. That is what rationing forces.

I have just applied to the District for an increased allotment for the prevention of fire in the area close to our home since we are adjacent to open space. There are no two circumstances that are identical. If we can avoid the nightmare of rationing we must do everything we can to do it. No one can call the \$100 million in landscaping during the last drought "revenue neutral". Perhaps the revenue we give to the District is neutral to you, but it is NOT neutral to us.

The District is uniquely capable of avoiding the crises we are experiencing now and the ones that seem inevitable in the future. We are in the unique position of having over the years garnered the right to water of superior quality, far above the standards set for today and meeting stricter standards sought for the future. Through the prudent planning of the district in acquiring watershed properties over the last fifty years, we are in a unique position of being within easy reach of the needed terminal reservoirs we could add to our system.

The \$150 million it would cost the District to build a new reservoir compares closely with the dollar losses to District customers during the last drought and the present one in plants lost, jobs lost and property devaluation. The District is not going to grow and grow with no limits. There are ultimate boundaries. It is the job of the cities and counties to oversee that growth. The District should assume an advisory position. The District should make every effort to eliminate the chance of requiring its Board to use its emergency powers to set mandatory rationing. Otherwise it is directly deciding matters of land use and growth---usurping the functions of local government agencies.

The Summary strongly points to the need for additional reservoir storage. This is only because the District has long maintained a strong desire for quality water. Clearly this drought and the ones to come are not the result of low quantity of water, but the result of low quantity of quality water. I would argue the "emergency" nature of this drought. If the District is intent on maintaining this high standard of quality, it must insure against low supply.

We are unique also in the aspect of being a "marriage" of users of three distinct climate zones, having different water needs. Certainly if water planning is based on projections that involve rationing at certain times, it will be a most unpleasant

marriage. It is absurdity to play water quality against NO water!

In summary, we have water rights to 325 million gallons of water per day. If we are using around 220 million gallons per day during an average year then we should be storing (conserving) water for times of emergency. If we are not willing to sacrifice quality, we must immediately build additional storage. To waste this water by not storing it for the times we need it is clearly a denial to the EBMUD customers of the water they have the legal rights to receive.

There are many choices open to us that were not addressed in the summary report because the District does not want to compromise on the quality of water served to its customers. But it clearly does not deal with the quality of its service if it commits us to years of rationing. In about 10 years the District will be faced with demand reaching supply in normal years. Let us pray we don't have anything but "normal" years.

Please give this your consideration. We urge you to plan for "water to meet the needs of the growing population in the East Bay service area."

Thank you,


Carolyn and Ned Herrington()

6-13-88

This magnificent oak and bay studded valley in the heart of EBMUD watershed land is threatened by construction of an unnecessary reservoir. Citizen initiative can prevent the loss of this urban wilderness on the edges of Oakland, Moraga, and Danville.

As a resident of Moraga I object strenuously to the possibility of building a reservoir at the Buckhorn Ranch. It would be far

better to build it at Los Vaqueros. Building it at Buckhorn will disrupt Moraga for months and months and lead to further home development around the reservoir and thus result in more water being used. Where were you the last 10 years* - just sitting on your duffs, giving yourselves big salary increases and reniging your duty to your customers. What a lack of responsibility you demonstrated. We implore you to PLEASE DROP THE BUCKHORN SITUATION AND GO TO A LOCATION THAT WILL LEAVE OUR COMMUNITY AS IT IS.

Buckhorn according to geology experts is the last of its type of land containing Indian relics, etc - it should be preserved.

You can help by joining the Buckhorn Canyon Preservation Council (B.C.P.C.)
c/o S.F. Bay Chapter Sierra Club
6014 College Avenue
Oakland, California 94618
415/653-6127

Photo: Bob Walker

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...why didn't you build more dams then?

Anita C. Reader
and



Mr. Raymond R. Pender
1461 Camino Peral
Moraga, CA 94556

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23

1198 Larch Avenue
Moraga, California 94556

15 June 1988

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JUN 17 1988

SECRETARY'S OFFICE

EBMUD Board of Directors
P. O. Box 24055
Oakland, California 94623

Dear Board Members:

I attended the Town of Moraga's public hearing to consider the EBMUD Water Supply Management Program. The comments made by members of the audience convinced me that the draft EIR is shallow in thought and totally unsatisfactory in its present form. It gives very little thought or consideration to the short range or long term effects of Buckhorn Canyon Reservoir on the people who live in Moraga.

A serious question of safety was raised in regard to the effect of earthquakes on Buckhorn Reservoir. Since the San Leandro Reservoir was cleaned and refilled in 1977 there have been 21 earthquakes in the area of these reservoirs, three in Buckhorn Reservoir area alone. One of these three was over 4.0 on the Richter scale. Questions regarding flooding in the event of a major earthquake have not been addressed by EBMUD. There are safety recommendations regarding earthquakes for work crews during construction but no thought for the people who will live and work in Moraga during construction and for many years to come.

Questions were also raised about increased danger from slides due to the water contained in the reservoir and the tidal wave effect caused by minor earthquakes. EBMUD does not adequately address the question of where the water will go in an emergency situation. Logic says even minor water overflows could cause flooding that is dangerous to many people.

The EIR does not offer any alternatives to meet the objectives of EBMUD water management, though it alludes to some. There does not seem to be an adequate answer to the question of need for this water. EBMUD needs to consider limiting its own growth to meet the needs of its present customers, instead of building excess capacity in our backyard for future customers in expanded EBMUD boundaries.

The EIR barely mentions the endangered species and special beauty of Buckhorn Canyon. It scoffs at the idea that climate changes would occur (fog and lower temperatures) because of the reservoir. There is not in my mind sufficient justification from EBMUD for a project that is this expensive both in terms of the money it would cost ratepayers and in the reduced quality of our lives while under construction and for many years to come. The mitigation measures for the construction phase do not address the impact on alternate routes to Camino Pablo. Specifically, I wish you to address the impact on Larch Avenue and other alternate streets in regard to increased traffic, the safety of neighborhood children and the quality of life in this residential neighborhood.

Sincerely yours,

J. M. Martin

1198 Larch Avenue
Moraga, California 94556

95

15 June 1988

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EBMUD Board of Directors
P. O. Box 24055
Oakland, California 94623

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SECRETARY'S OFFICE

Dear Board Members:

OFFICE OF PLANNING

Your draft Environmental Impact Report regarding the proposed Buckhorn Canyon Reservoir is totally unsatisfactory in its present form. You do not adequately address problems of community safety following a major earthquake. What would happen to all the water? Where would it go? Who would be in danger from flooding? Moraga? San Leandro? Either community is of sufficient size and close proximity to the proposed reservoir to be in danger of flooding and to have serious problems in the event of a major earthquake. What about tidal waves caused by minor earthquakes?

21

The EIR barely mentions the endangered species and the special beauty of Buckhorn Canyon. It alludes to some increased dangers from slides in surrounding areas caused by the retention of water in the canyon, but does not really discuss the fact that we already have slide problems in our area and don't need to increase the risk anymore.

20

You do not adequately establish the need for this reservoir. You do not discuss enough of the alternative solutions to convince me that the sacrifice of Buckhorn Canyon is necessary in order to provide sufficient water for all your present customers. I am not interested in EBMUD growing and supplying water to as yet undeveloped areas of San Ramon. If you do not have enough water, do not keep adding customers to your service area.

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In short, you have not established the need for the amount of additional water Buckhorn Canyon reservoir would supply. You have not justified the amount of expense involved for me as an individual ratepayer. You have not explored other alternatives to my satisfaction. And you have not convinced me that you thought out the environmental consequences of the reservoir and adequately provided for the safety of my family and neighbors during the construction of the reservoir, and for the many years' duration of the canyon's use as a reservoir. You have not done your homework!

Sincerely yours,

Patricia L. J. J. J.

9

Zoë KLIPPert ASSOCIATES
27 HETFIELD PLACE, MORAGA, CALIFORNIA 94556 (415) 376-8685

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June 16, 1988

Board of Directors
East Bay Municipal Utility District
2130 Adeline Street
Oakland, CA 94623

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OFFICE OF PLANNING

Dear Directors:

I hope that you will give careful consideration to the comments that have been offered in opposition to the building of a reservoir in Buckhorn Canyon. My husband and I and our two sons have lived in Moraga for fifteen years, and we are particularly concerned about the impact of construction upon the children who attend Camino Pablo and Joaquin Moraga Schools. Four years of noise, air pollution and heavy traffic seem an unfair price to pay for a reservoir that would disrupt our natural environment in the name of supplying water to the San Ramon Valley.

16

Please think seriously about the alternative sites at Los Vaqueros and Pinole, where the environmental impact would be less severe.

29

Sincerely yours,

Zoe W. Klippert

Zoe W. Klippert

TIRED OF WATER RATIONING? READ ON - - -

W.A.T.E.R., is a committee of concerned citizens who oppose unfair rationing and who are appalled at the prospect of continuing water shortages. We urge you to send this letter to the Board of Directors of EBMUD. Certain Board members want to impose a permanent block rate structure, similar to the rate structure being used during the drought. This would require people living in warmer areas to continue to pay higher rates. We believe this is unfair.

Additional terminal storage is needed to protect against future water shortages resulting from drought or failure of the aqueduct.

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OFFICE OF PLANNING

WE URGE YOU TO MAIL THIS LETTER WITHOUT DELAY!

Thank you.

C. W. Brydon, Chairman
Steering Committee, W.A.T.E.R.

Donn D. Dears, Chairman
Resource Planning Committee, W.A.T.E.R.

July 1988

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

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SECRETARY'S OFFICE

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

and

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

Very truly yours,

Mary M. Smith

392 Camino Lobosante
Arinda, CA 94563

Robert A. Skrdla
419 Belfair Place
Moraga, CA 94556
415/376-6265

June 17, 1988

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OFFICE OF PLANNING

Mr. Richard Kolm
Assistant Chief Engineer for Planning
EBMUD
2127 Adeline
Oakland, CA 94623

Dear Sir:

We vigorously oppose the plan to build the Buckhorn Reservoir. In addition to eliminating open space, the plan represents a major disruption to Moraga during construction, a permanent safety hazard posed by earthquake threat to the dam, and the addition of even more local fog. This is the price we Moragans would get to pay so that the San Ramon Valley developers don't have to face up to the reality that there are finite physical limits to growth, even in the San Ramon Valley.

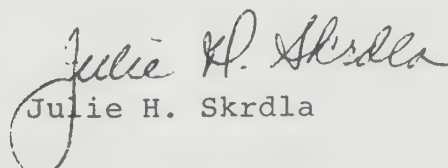
Please recognize this plan for what it truly represents, and deny approval.

Thank you.

Sincerely,



Robert A. Skrdla



Julie H. Skrdla

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100

JUN 17 1988

SECRETARY'S OFFICE

JUN 15, 1988

WFO

P.O. Box 24055

Oakland, CA 94604

Whom it may concern:

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JUN 17 1988

OFFICE OF PLANNING

We are writing to express our opposition to the construction of the Buckhorn Dam project.

It has come to our attention recently that this project includes burying large pipe which requires excavation on Camino Pablo. This is quite dangerous for objection to this project centers around the safety of school children on the street during the time of construction. As you are aware, there are two schools on Camino Pablo, and many children residents who live near the street. The safety of this children around trenches possibly 80 to 90 feet deep is in question. (16)

We understand the need for water and for progress for the public good and would put up with the inconvenience if that were the only issue. The safety of our children, however, must take precedence over this particular project. We suggest that you identify other sites from which water can be drawn and conduits be constructed in unpopulated areas that will not put children, especially that of small children, at risk. It is for this reason that we oppose the Buckhorn dam project.

Sincerely,

Ludwig and Ramona Phares

Ludwig and Ramona Phares

28 Camino Pablo

Oakland, CA 94604

GEORGE M. OLDENBOURG, Jr., D.D.S.

2140 SHATTUCK AVENUE (SUITE 701)

BERKELEY, CALIFORNIA 94704

Telephone 843-1192

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OFFICE OF PLANNING

June 15, 1988

Dear Mr. Kolm:

As a 20+ year resident of Moraga, I am writing to indicate my opposition to construction of the proposed Beckton Reservoir.

The questions of seismic safety and the safety of our children and residents in the area of construction are foremost in my objections.

There must be sites available which would not endanger the lives of so many school children. Common Path, the main road in front of Jackson Moraga Jr. High and Common Path elementary schools would be heavily used by large trucks for approximately 4 years. Previous experience with drivers of the heavy construction vehicles leads me to fear for the safety of the children, plus the tremendous volume of dust they will be forced to breathe.

In any event I wish to add my name to those protesting the construction.

Thank you

RESIDENCE:
402 REDFIELD PL.
MORAGA 94556

21

16

June 13, 1988

Richard Kolm
Asst. Chief Engineer for Planning
EBMUD, P.O. Box 24055
Oakland, CA 94623

PETER VORSTER
6732 Manor Crest
Oakland, CA 94618

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OFFICE OF PLANNING

Dear Mr. Kolm:

This letter contains my comments on EBMUD's proposed Water Supply Management Program (WSMP) as presented in the summary report, technical report, and draft EIR report. I make these comments as a private citizen who has lived in the EBMUD service area for more than 15 years. Given my background as a consultant in hydrology and a member of the Citizens Advisory Committee on EMBUD's Water Action Plan I can appreciate the challenge of preparing a complex long-range water management plan and I commend EBMUD for making the process open to public scrutiny and input.

The WSMP is intended to deal with problems of security, shortage, and water quality. It is very difficult to make an informed decision about the WSMP because of the incomplete evaluation of the problems and the various alternatives proposed to deal with them. There is inadequate technical documentation for a number of the conclusions reached in the WSMP. The following questions and comments itemizes some of the information needed to properly evaluate the problems and the various alternatives.

Security

- a) What are the assumptions used in determining the amount of time needed to restore Mokelumne water service in case of an aqueduct outage? Wouldn't an event (earthquake, flood) that could cause a prolonged outage in the Delta be met with a coordinated response by Federal, State, and local agencies?
- b) Given the vulnerability of the aqueducts, shouldn't their replacement be given high priority and be made part of WSMP. Although aqueduct replacement would increase the cost of the WSMP wouldn't it reduce the required amount and therefore cost of new terminal storage? The Citizens Advisory Committee on EMBUD's Water Action Plan recognized on P. 8 of their final report that "cost should not be the only factor considered relative to security of supply."
- c) The Citizens Advisory Committee also recognized the risk of dependance on a single source of supply (including the risk of contamination of the Mokelumne from a Rancho Seco nuclear accident) when they stated "the

Board should be concerned with the implications and dangers of a single source of supply in the event of a disaster" (P.8 of the final report). It seems prudent to have a back-up supply source that wasn't routed through the Mokelumne system, for example by diverting the American River entitlement from the Sacramento River above Hood.

17

d) How many days could the existing terminal reservoirs at normal operating levels supply at the current level of demand and at reduced (25% and 35% less) levels of demand (presumably the number of days would depend on the time of the year an aqueduct outage occurred)?

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Shortage

a) Would it be feasible for EBMUD to invest in water conservation for the other Mokelumne users in exchange for the saved water?

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b) Would a more aggressive conjunctive use program in the lower Mokelumne Basin increase dry year yield?

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c) How do the demand projections compare to the current general plan projections of the communities within the service area?

4

d) Why were the demand projections made in the early 1970's so excessively high and why should there be more confidence in the demand projections being made today?

4

Increased Terminal Storage

a) How does EBMUD's existing and proposed terminal storage space compare to other major urban water agencies?

6

b) Were terminal storage reservoir sites (new and existing reservoirs) outside the District's service area in southern Alameda County, considered? Although I recognize that those sites might require using non-Mokelumne supplies (or require the construction of a pipeline to deliver Mokelumne water), they do have the potential to be used cooperatively by one or more other water agencies (San Francisco, Zone 7, Santa Clara, etc.).

29

c) Will the current EIR be the only one required if the EMBUD Board decides to authorize Buckhorn Reservoir?

23

d) If Buckhorn Reservoir were used to increase local yield, would it still provide the specified amounts of shortage and security supply?

6

e) Are there any inactive faults at the Buckhorn site? The absence of active faults does not imply that earthquakes won't occur there as the 1971 San Fernando earthquake manifested (it occurred on an inactive, ancient fault).

24

Delta Water

a) What is the increased cancer risk in drinking a blend of treated Delta and Mokelumne water for a defined period of time (say 6 months)?

11

b) How long of a period could Delta water be used at various blending

ratios before additional treatment would be required? Would a new treatment facility need to be built if Delta water were used on a short-term, highly intermittent basis?

11

Water Conservation

- a) Given the potential of landscape irrigation management for saving water, why was it not more fully implemented in the proposed conservation program?
- b) If the San Jose, Monterey, and Los Angeles residential retrofit programs are successful would EBMUD implement a similar or better program in their WSMP (presumably one would learn from their mistakes)?
- c) Were on-site rainwater collection systems for landscape irrigation considered?

10

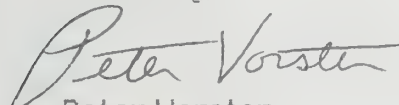
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I feel that by replacing the aqueducts and considering a mix of alternatives such as regional water supply management (including interties and exchange agreements), increased water conservation, Delta pumping for short periods in extreme droughts, coordinated Mokelumne Basin management that included the purchase of dry year water rights, aggressive conjunctive use, and other yield increasing programs, the security and shortage problems faced by EBMUD could be met without having to build or at least reducing the necessary size of a new terminal storage reservoir. I hope that EMBUD seriously considers a full mix of alternatives before implementing the proposed WSMP. Thank you for your consideration.

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Sincerely,


Peter Vorster

Carol Schemmerling
Chair of the Board
Urban Creeks Council
861 Regal Road
Berkeley, CA 94703

RECEIVED

JUN 17 1988

OFFICE OF PLANNING

Mr. Richard L. Kolm
Assistant Chief Engineer for Planning
EBMUD
P.O. Box 24055
Oakland, Ca 94623

Dear Mr. Kolm,

I am writing to comment on the "Water Supply Management Program Draft EIR." The Urban Creeks Council is a statewide organization with the primary goal of conservation and protection of California's valuable stream resources, including their water, streamside vegetation, and associated wildlife.

Endangered Species and Other Species of Concern

On page 5-83, not all of the potential habitat for the Alameda striped racer is listed. On page 5-65, the report lists Diablan Sage Scrub habitat existing at the proposed tunnel outlet site near Miller Creek and along Big Burn Road where a construction access road is proposed. This habitat is also suitable for striped racer.

The level of survey for this species was not sufficient to determine its presence or absence. Before a statement can be made that "Potential impacts to rare species are not expected to be significant" (page 5-95), more detailed studies would have to be made. In addition, should Alameda striped racers be present, mitigation would be difficult since not a great deal is known about the habitat requirements of this species.

With respect to black-shouldered kite habitat on the Buckhorn project, the loss at the Buckhorn site of 34 acres of riparian habitat, this species' primary nesting and roosting habitat, should be considered significant. In addition, the loss of grassland would be strongly detrimental to this species and to the northern harrier. It is not made clear in the report how the proposed reservoir would increase habitat for this species to result in a positive impact, as stated on page 5-89. The loss of 54 acres of habitat at the Pinole site would also certainly be considered a significant impact. As stated above regarding the

striped racer, the level of survey for other species of concern is likewise inadequate to determine the impacts of the project alternatives. This includes black-shouldered kite, Cooper's hawk, red-legged frog, and western leatherwood shrub.

With regard to the destruction of all but approximately 3 to 4 percent of the total rainbow trout spawning habitat available in the Kaiser and Buckhorn and Kaiser watersheds, it is difficult to understand how this would not be considered a significant impact. No comment was made in the analysis concerning the value of the unique genetic resources of this population of rainbow trout and what impacts this loss would present.

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Mitigation for the loss of fisheries habitat proposed in the document would not come close to reducing the impacts of the reservoirs proposed on the Buckhorn and Pinole projects to a level of insignificance. Again, avoidance would be the primary method of mitigation.

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For the Pinole site, it is noted on page 5-92 that western pond turtle and black-shouldered kite habitat would be destroyed. This is a significant impact and should be noted as such. Mitigation proposed for impacts to western pond turtles is not acceptable. Habitat for this species is limited. Most of the suitable habitat for this species would be expected to already be inhabited by other populations. The transfer of individuals of this species to a new site would likely result in their death. Either habitat conditions would be unsuitable or intraspecific competition would occur, reducing the viability of the population and promoting dispersion with concomitant predation losses. Avoidance of the site is the only feasible alternative for mitigation to this species. In other words, the impacts are not mitigable if the Pinole project is implemented.

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We also have concern over the use of the term "mitigation" with regard to impacts at the Los Vaqueros site. Proposed as mitigation for the impacts to plant communities, special-status plant species, and endangered wildlife is to do additional surveys. This is not a form of mitigation. Additional surveys, as noted above, would be useful to determine the presence or absence of these species on the project sites. Avoidance, minimization of impacts, and rectifying the impacts are possible categories of mitigation that might be able to be pursued should potential species of concern be found to occur.

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Terrestrial Habitat

We agree with your statement that the loss of 34 acres of riparian habitat on the Buckhorn project would be a significant impact. The associated wildlife impacts resulting from this loss are understated. Riparian habitat has one of the highest levels of wildlife use of all terrestrial habitats in California. Nesting birds and many other species of animals create territories from which individuals of the same species are repelled. Although territories can be compressed where enough resources are available, most animals that move into another area find few available sites not already taken. In the process of searching for suitable sites, most of these displaced animals die from exposure, lack of food or water, or from predation. In addition, inundation of sites would destroy the less mobile species of animals such as terrestrial salamanders, lizards and snakes, and burrowing mammals such as shrews, moles, gophers, and mice. The same comments also pertain to the impacts on local wildlife at the Pinole site.

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Wetlands

The report is inadequate in its assessment of wetland impacts. Wetland, as defined by Section 404 of the Clean Water Act, is protected under jurisdiction of the Army Corps of Engineers. The bottomlands of streams that would be flooded, along with many of the drainage swales that act as tributaries to the streams proposed for inundation, would be considered protected wetlands. In addition, a number of small ponds and seeps would be inundated by the Buckhorn project, but no mention was made in the report regarding the impacts of the loss of these wetlands. These ponds provide important water sources for wildlife, and the emergent wetland plants provide habitat that would not be present at the margins of the proposed reservoir. The amount of wetlands that would be destroyed and replaced by open water habitat should be determined in the report. Any mitigation proposed for losses should be described in enough detail to include location and method of restoration. This information is necessary to determine the level of impacts that would result from the proposed projects.

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On a similar note, we are especially concerned over the report's contention that the significant impacts resulting from the loss of terrestrial and aquatic habitats can be mitigated. The vague references to the EBMUD Wildlife Management Plan on page 5-93 for the Buckhorn project do not provide adequate information to determine whether the methods and amount of area required would be adequate to mitigate these losses in habitat value.

No plan for riparian habitat mitigation is described for the 34 acres that would be inundated by the Buckhorn project or the 54 acres on the Pinole project. There is no way to evaluate the impacts of the loss of riparian habitat losses if no specific plans for replacement of the values of this habitat are described. We believe that it is not feasible to mitigate for

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these losses. Finding a stream that could be restored to a condition as valuable for wildlife as those proposed for inundation would be extremely difficult.

Thank you for the opportunity to comment of the EIR. We hope that a more complete environmental document will result from your responses to our concerns.

Sincerely,

A handwritten signature in cursive script, appearing to read "Carol Schemmerling".

Carol Schemmerling
Board of Directors

June 12, 1988

RECEIVED

JUN 17 1988

SECRETARY'S OFFICE

East Bay Municipal Utility District
2130 Adeline Street
Oakland, California

RECEIVED

RE: Proposed Buckhorn Reservoir

JUN 17 1988

Gentlemen:

OFFICE OF PLANNING

I am writing to express my deep concern over the proposed reservoir being built in the beautiful oak and bay studded Buckhorn Canyon south of Moraga.

I have attended meetings, listened to qualified experts, and have read arguments for and against the dam being built, and I am convinced it should not be built in that location for many reasons. You will destroy one of the last wilderness areas, one rich in beauty, animal wildlife, one of the few areas in the state where falcons live - and will open up the area for recreational usage and home development. You indicated that possible recreational use would be available - and this will only bring more congestion and problems to Moraga. (19)

The building of this dam would certainly take more than 10 months and will cause untold problems for we in Moraga - traffic congestion, road damage, land movement, danger to school children, unbearable noise hazards for the schools, as well as the residents and will forever change our quiet community. The traffic alone during construction will cause great problems to St. Mary's College, too, and will cause the street where we live on, Rheem Blvd., to become a virtual freeway. I could go on listing other problems, but you have already heard people far more knowledgeable than I express concerns and reasons why this dam should not be built. I was very impressed with those who spoke out - they had done their homework well, and backed up their arguments with facts. (16)

Further, I am concerned about earthquakes which occur here. In Moraga we experience quite a few, and a geologist who spoke said we could probably experience more if the dam were built because of its tremendous weight. I know that since San Leandro Reservoir went in, we do seem to have more - and incidentally, more fog, too. If a big earthquake does occur, and we are told that certainly there will be a big one some time in the future - what will happen to the dam? If it does overflow - will it go to San Leandro and flood it - or to Moraga? (21) (19)

You seem to minimize any discussion of a possible Los Vaqueros Reservoir. It seems that it would be far better for it to be built than Buckhorn, if one has to be built at all. It will hold more water and it would be built in an area which would be far easier to construct. From what I have read and heard - construction there would present far less complications in the overall picture than the problems we in Moraga would experience. (19)

I urge you to first consider the other alternatives suggested by the many informed and educated people who gave reasons why the dam should not be built. I am outraged that you let 9 years go by without addressing the water problems we are now facing. Other communities in the greater Bay Area did their homework and are in much better condition than those served by EBMUD. Additionally, you are raising our water rates - and I am not at all convinced that you will ever reduce them once the drought is over.

I am doing everything in my power to reduce water usage in our home and gardens. Why haven't you done everything in your power in planning ahead? I believe you have not served us well. You are asking us to pay more for using less water - yet you grant high salaries and raises to your management and Board of Directors. I was astonished to read that you even pay the Board for health insurance coverage. Surely they are already covered by their own individual employers. It seems to me and to many others that all you want to do is to enlarge the area you will serve, thereby creating more need for water and putting a strain on all of those now in your district.

Please, for once, consider your customers -- DON'T build Buckhorn Reservoir, let us live in our peaceful valley, and let the wildlife continue to live in peace, too. Please let us enjoy our open space - not just we who live here now, but for generations to come. Open space, and beautiful wilderness is diminishing too quickly due to greedy developers and land development. As our state of California becomes more populated, and it is, at a terrifying rate - open space will be more precious - we need a place to hike in and to enjoy some solitude - a place where stress which congested areas produce. A recreational usage area in not necessarily restful due to the throngs of people there. (22)

Again, think ahead - save some beauty for our children and grand children to enjoy.

Sincerely,

Ada M. Peterson (Mrs. C. E.)

603 Rheem Blvd.
Moraga, California
94556



SAN FRANCISCO BAY CHAPTER • SIERRA CLUB

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Richard L. Kolm: Asst. Chief Eng. for Planning
EBMUD, P.O. Box 24055
Oakland, CA 94623

June 16, 1988
RECEIVED

JUN 17 1988

Dear Mr. Kolm:

OFFICE OF PLANNING

The Bay Chapter has identified a large number of major deficiencies in the EIR. I have tried to organize them in a coherent manner for ease of response. The organization of the document is as follows:

- I. Unsupported and unreferenced calculations and assumptions
- II. EBMUD's actual needs
- III. Alternatives
- IV. Cumulative impacts
- V. Growth related impacts
- VI. The Los Vaqueros option is not yet defined
- VII. The consequences of dam failure
- VIII. Significant impacts
- IX. Mitigation
- X. Unavoidable impacts
- XI. Short term uses vs. long term productivity
- XII. Conclusions

I. **Unsupported and unreferenced calculations and assumptions.** The EIR and Technical Report introduce numerous figures and assumptions which are one or more of the following:

- o unreferenced
- o unsupported
- o impossible to verify
- o inexplicably incompatible with previous numbers published by EBMUD
- o unreasonable

However, the CEQA Guidelines make it clear that statements made in the EIR must be explained and verifiable, either in appendices (e.g. in a technical report) or through citation of preexisting reports.¹ The EIR fails on both counts. The Technical Report is a slightly more detailed rehash of elements of the EIR -- never exploring the assumptions which underlie numerous conclusions by EBMUD. Citations are rarely given in the text of either document. The bibliography is incomplete and does not give relevant page or section numbers. Finally, many internal reports are referred to, but never cited.

These serious omissions have made the document a failure as a tool for reasoned planning and make the document legally vulnerable. They have obscured systematic exaggerations in the size of the projects claimed to be necessary

¹ 15147, 15148. Refer to CEQA: The California Environmental Quality Act: Governors Office: Office of Planning and Research: June 1986. Includes Statutes and Guidelines. Hereafter, all CEQA references will refer to this document unless specified.

and thus have increased the potential environmental impacts of the proposed projects and made viable alternatives seem less reasonable.

I. A. 13 month outage. ERMUD has failed to make its case that a 1/80 year earthquake event in the delta would probably lead to a 13 month outage.²

o The consultant's report is not cited in the sections on aqueduct outage, but merely listed in the Bibliography.³ Moreover, two other prior reports needed to fully understand the most recent report are not listed at all. (7)

o The report indicates that 6 months would pass after a 1/80 year earthquake before repairs to the aqueduct would even begin. Thereafter, work would proceed only 16 hours a day, only 5 days a week. Supplies and contractors would not be obtained from outside the Bay Area.⁴ This is not a likely scenario. Considering that the Delta is crucial, not only to ERMUD's water supply, but to the South Bay, the Central Valley, and Southern California, if a major catastrophe were to occur in the Delta, the resources of both the state and federal governments would be brought to bear upon the problem. This would include the use of conscripted material and of military personnel and would proceed around the clock until the situation was resolved. Considering the importance of this 13 month figure to ERMUD planning, it should request a study by the Corps of Engineers as to how long it would take them to make emergency repairs on the Mokelumne Aqueduct given the level of damage assumed and assuming the full cooperation of the state and federal governments.

I. B. Salt Intrusion. The EIR has failed to demonstrate that salt intrusion would render Delta water unusable for the entire repair period after widespread levee failure. (11)

Again, massive salt intrusion would be dealt with by the combined resources of the state and federal governments. Granted that the water might contain unacceptable levels of salt for several months after an earthquake, ERMUD needs to show that the Bixler pumping station would remain unavailable for the entire repair period. Only then would it be correct to suggest that Delta water would not be available as an option. Precise figures of intrusion duration cannot be produced, of course, but ERMUD should attempt to estimate the duration under the most likely scenario — massive intrusion with a massive state and federal response. Instead, the EIR merely gives peak values for salt levels with absolutely no time information. This is clearly an inadequate analysis (Tech. Report 2.15-16, 5.6-7). (7)

I. C. Efficiency vs. Deficiency. The EIR has failed to support the contention that the acceptable deficiency Districtwide must drop from 39% to 35% in order to compensate for increased efficiency (Tech. Report 3.8, 22). This assertion, if proved, would have a significant impact upon the size of the projects under consideration. However: (3)

² See EIR 4.1, 6.3. Technical Report 2.12-13

³ Jacobs Associates, "Replacement and Repair Feasibility for the Mokelumne Aqueducts in the Sacramento-San Joaquin Region for the East Bay Municipal Utility District", April 1987.

⁴ This is scenario B in Jacobs. For 6 month delay pp. 27-30. For Work schedules p. 23. For assumption of local resources pp 24, 25, 38. Also see the fold out summaries in appendix c.

- o no reference is given to any public document which supports these figures. 3
- o EBMUD projects a total District conservation savings of only 7 mgd by the year 2020 or about 3% of total demand. Yet EBMUD has made an 8% drop in the supposedly achievable reductions (from 39% to 35%).
- o This difference cannot be made up by arguments about reclamation projects. The largest reclamation project under consideration is the 5 mgd Chevron Project. But the petroleum industry only cut back by 18% in 1977 — the smallest reduction of any EBMUD sector. Therefore transferring water destined for the petroleum industry to other, more flexible sectors can only increase the achievable reduction in drought.
- o Approximately 50% of the growth in residential water demand is projected to occur in Central Contra Costa County. But this area has the highest household and per capita water use in the District by far and thus has tremendous potential to cut back on water use in a emergency. Its predominance in future water demand growth, if anything, increases the percentage cut that the residential sector could sustain.

I. D. Recommended drop in allowable deficiency. The EIR has failed to justify the contention that the maximum allowable deficiency could reasonably be dropped from 39% to 25% in EBMUD planning (Tech. Report 5.8, passim). 3

o The study referred to which estimates landscaping losses in 1977 is not cited and has not been made available for public review to our knowledge. Nor does that study apparently make a comparison between economic losses at 39% vs. 25% reduction (Tech. Report 3.8-9, 5.8).

o Considering the high degree of flexibility shown by the Bay Area in 1977, the figure of 39% is a reasonable compromise between the need to protect against unreasonable sacrifice and the need to minimize costs and environmental damage. Marin residents were able to conserve even more.

o EBMUD Board policy calls for planning at the 39% deficiency level. It is improper that the figure of 25% be given equal or greater prominence without Board direction to that effect.

o Finally, a change of planning goals from 39% to 25% would have significant environmental impacts in that it would greatly expand the size of the projects required by EBMUD. The impacts of such a change must be covered in detail. In fact, this change in policy is worthy of its own EIR.

I. E. Interties. The EIR fails to adequately examine the potential emergency supplies available through interties with other agencies. 10

o No references are given to a study in which intertie capabilities were found to be insufficient nor was a detailed discussion given in the Technical Report (e.g. 2.26)

o Reasonable numbers should be developed to estimate the amount of intertie water currently available to EBMUD and the amount which would be available assuming physical interties were built in advance. These numbers should not be based upon available surpluses, but upon the assumption that cooperating agencies agreed to share deficiencies equally. Connections considered should include the Hetch Hetchy system, the South Bay Aqueduct, San Luis Reservoir via the San Felipe Project, San Ramon Water District, Vallejo, the Solano Project, the North Bay Aqueduct, Marin County, and CCWD.

I. F. Conservation. Conservation potential has been attacked as either a minor factor or as actually damaging the resiliency of the District. Both assertions are false. This evisceration of conservation potential has allowed EBMUD to propose larger projects than necessary to serve the District.

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o As recently as a year ago, EBMUD was projecting a total conservation savings of about 20 mgd by 2020 with total demand rising to only 256 mgd. These conservation measures were described in great detail by EBMUD's Urban Water Management Plan. EBMUD indicates that it is continuing the conservation measures indicated therein, but now projects savings of only 7 mgd by the year 2020 with a total demand of 270 mgd. No study was cited to justify this dramatic drop in projected conservation. At the very least, the reasons for such a drop need to be explained in detail. A comparison with San Jose's program, which projects long term savings in the neighborhood of 7 mgd for this year alone would also be helpful.

4

o Water pricing as a means to encourage water conservation is rejected using a vague reference to an internal EBMUD study. This document must be referenced and made available for public scrutiny. Certainly its conclusions are controversial. The California Department of Water Resources (DWR) has long recognized the effectiveness of water pricing in reducing demand.⁵ EBMUD should explain how it came to different conclusions and why DWR is wrong.

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o Mandatory retrofit of water saving devices, projected to save over 13 mgd, is also rejected prematurely. This is not a radical proposal as implied in the EIR. A similar measure was passed in Los Angeles in September of 1986 (Ordinance number 161659). There will be costs associated with retrofits, but they are exaggerated in the EIR. EBMUD could easily justify a rebate program which covered a substantial portion of the costs — due to savings on pumping, sewage treatment, and the marginal cost of developing new water supplies. The EIR should estimate these savings and also the savings to the ratepayer due to reduced heating and pumping costs.

o Many other significant conservation measures have been described by Dr. Don Forman in his report,⁶ (hereby incorporated into these comments by reference).

o In computing its projected demand for the year 2020, EBMUD has arbitrarily added 10 mgd to total demand. The justification given is that this is a "variance for weather and other conditions" (Technical Report 3.25). Elsewhere (Technical Report 3.23) it is stated that "The planning level of projected water use between 1986 and 2020 is taken as the mean of the high and low projections plus one standard deviation of 10 mgd to reflect uncertainty due to the short-term fluctuations discussed above" (Tech. Report 3.23) In other words this is a fudge factor. The proper approach would be to place error bars of 10 mgd around the actual mean. Thus EBMUD's actual projection should be 260 mgd \pm 10 mgd. Or if the projections of a year ago are used, the number should be 246 mgd \pm 10 mgd.

3

⁵ see, e.g. Water Conservation in California, Bulletin 198-84, 7/84. pp. 35-38. For example, the Washington Suburban Sanitary Commission near Washington D.C. reduced household consumption by 18% using a progressive pricing structure.

⁶ "EBMUD's Future Water Supply: Conservation... Not Reservoirs: A Commentary on EBMUD's Discussion of Water Supply System Needs", 3-17-87.

o EBMUD ignores the carryover effects of drought upon long term conservation. The 1976/777 drought resulted in significant permanent savings as people and businesses learned to use water more efficiently. The same is likely to be true as a result of the drought of 1987/88. (10)

o The EIR makes the argument that permanent increases in conservation and reclamation can be counterproductive by making cutbacks more difficult in drought. This is a specious argument. Consider two different towns -- A and B, identical in every way except that town A uses water much more efficiently. In a shortfall, town A will be much better off because:

1. few additional cuts will be needed.
2. it will be saving needed water from the very beginning of the shortage.
3. It will suffer less damage because its landscaping will already be designed to survive low water conditions.

If town A should grow because of its increased water availability, then the allowable deficiency may need to adjusted downward somewhat to compensate. Since EBMUD already proposes to make this adjustment (though its current calculations are dubious), it is unfair to state that conservation will increase the potential burdens to the District. Also, since water saved by reclamation usually goes to uses with higher flexibility, the argument on page 8.6 of the EIR is nonsense in any case.

I. G. Reliable yield. EBMUD assumes that the reliable yield of the Mokelumne supply must drop from a current value of about 252 mgd to about 225 mgd by the year 2020 (Tech. Report 3.23). This would appear to be true only if EBMUD fails to take countermeasures. (9)

The computations and assumptions behind this projection are not fully explicated and they should be. The primary causes given are increased demand from prior rights holders and riparian rights (Technical Report 3.16). However, this analysis fails to consider several possibilities which could greatly increase the reliable yield:

- o reduction of seepage losses in the Mokelumne River through conjunctive use or water banking programs.
- o drought contingency contracts with agricultural water agencies.
- o supply of downstream users through Delta-to-Camanche Reservoir pumping.

The EIR should describe the costs and impacts of these options. If they are rejected, the reasons should be stated clearly. Drops in Mokelumne yield are not inevitable and cannot be treated as such by EBMUD.

I. H. Improper assumptions underlie estimates of storage needed for security. (4)

EBMUD asserts that additional storage of 145,000 AF or 100,000 AF is needed to reduce maximum District hardships in 2020 to 25% and 39% respectively. Further, EBMUD assumes that the current District requires 95,000 and 55,000 AF of additional storage to attain the same assurance of 25% and 39% deficiency in the event of a 13 month outage.⁷ I have shown that the 13 month outage figure is probably exaggerated, that the projected demand of 270 mgd is considerably overstated and that the drop in reliable yield is avoidable.

⁷ The 95,000 af number is given in the Staff Summary, p. 30. The 55,000 af figure is a reconstruction from computations given on the same page. I have found no explicit reference to these figures in the EIR or Technical Report.

However, even if these figures were accurate, EBMUD has still failed to make its case due to several unreasonable assumptions:

6

o That under current conditions, reservoir storage of only about 100,000 af of water would be available for backup (Technical Report 2.20, Staff Summary p. 30). The basis for this assumption is never fully explained. However, the basis can be reconstructed and is very weak for several reasons:

1. EBMUD asserts that 17.5 KAF of local storage are unusable. This is untrue: in an emergency it could be retrieved using portable pumps. Thus this water should be included in every calculation of water supply.

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2. Under current operating procedures, terminal storage is allowed to drop each summer and fall (to save on pumping costs and for flood control). The normal minimum storage levels are about 115,000 af. But the average storage levels are much higher, perhaps 130,000 af. The chances of a 1/80 year earthquake occurring at the precise time that storage is at its normal minimum is well below 1/80 and below the area of reasonable planning. Therefore, even using EBMUD assumptions, the assumed value of reservoir storage should be increased (in addition to the inclusion of the so called "unusable" storage).

3. More importantly, the large seasonal variations in the level of terminal reservoir storage are not inevitable. Drops in local storage during the normal years and even during drought are the result of decisions by EBMUD staff, not physical necessity. EBMUD is capable of keeping the local reservoirs full even during peak summer months by pumping. Thus, the only real constraint on local storage is the small reservation needed for flood control. Certainly storage levels need not vary as much as EBMUD has allowed them to in the past. Also, it is widely believed that EBMUD will soon attempt to construct a fourth barrel to the Mokelumne Aqueduct because of rising demand and the desire to sell 50,000 af to CCWD per year. if this barrel is added, the terminal reservoirs could be kept full year round without pumping. A reliable storage level of at least 140,000 af could probably be achieved. Therefore, a discussion of the needs of flood control should be included. An estimate of the potential reliable storage levels assuming the system were operated for security is needed. The impacts associated with pumping or a fourth barrel should be given.

o That no interties are available. However, San Francisco could and would supply over 10,000 af in a 13 month outage through an existing intertie. Significant amounts would also be available from other sources (see above). As noted elsewhere, the EIR merely calls these amounts "insufficient" (EIR 4.3), without specifying any actual numbers

o That it would be a drought year. This is unreasonable. The chances of drought and severe earthquake occurring together are below the zone of reasonable planning. Thus, an additional 10,000 af could be reasonably assumed from local rainfall over a 13 month period.

Thus at least 160,000 af could reasonably be relied upon for a 13 month outage if EBMUD were to operate its terminal reservoirs so as to maximize the security of the system. The value needed to serve new growth (ignoring alternative approaches for the moment) would be at most 40,000 af (enough water to serve projected demand growth for 13 months assuming a 39% cutback). This volume of water is in line with the reservoir EBMUD was looking at as recently as a year ago ("Discussion of Water Supply System Needs", 2/87). The EIR should explain why EBMUD suddenly tripled the storage thought necessary.

II. EBMUD's actual needs. EBMUD figures and assumptions have systematically inflated the size and impacts of its program. (4)

- o Current customers have ample water. A 13 month outage could be weathered by current customers with a deficiency below 39%. This is within Board Policy.
- o Current customers should not be assessed any amount whatsoever to pay for new terminal storage. Additional storage would go to benefit new growth alone. Any contribution by current ratepayers would subsidize new growth.
- o Even assuming that demand rises to 270 mgd in 2020, that 13 months is a realistic repair estimate for the Delta aqueduct, and that no additional security options are considered beyond terminal storage, only about 40,000 af of new terminal storage is needed for security.
- o Even assuming that demand rises to 270 mgd in 2020, that reliable yield falls to 220 mgd, and that no additional drought management options are considered beside storage, only 55,000 af of additional storage is needed for drought.⁸
- o With more reasonable estimates of future demand and reliable yield, additional drought storage needs could be reduced to 40,000 af or lower.
- o EBMUD should reexamine its need for additional terminal storage using more realistic estimates of its needs. If EBMUD can refute this analysis, it should do so, not by vague and undocumented statements, but giving its assumptions and arguments in detail and with adequate references.

III. Alternatives. The EIR fails to provide feasible alternatives, though such alternatives clearly exist.

- o Various alternatives are discussed and dismissed individually. The creation of a feasible alternative which would employ several actions at once is never seriously attempted.⁹ (10)
 - o The environmentally superior alternative is never identified as required.¹⁰ (3)
 - o The occasional and temporary use of Delta water is never seriously examined on the grounds that it is against District Policy.¹¹ However, the CEQA guidelines make it clear that environmentally superior alternatives must be explored, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." (15126.d.3) (13)
- The EIR should not just compare the chemical properties of Delta water with Mokelumne water, but should estimate the actual health impacts of once in decades use of treated Delta water assuming advanced treatment. These (11)

⁸ 55,000 af is EBMUD's own number assuming a 39% allowable deficiency. See Technical Report, p. 5.11.

⁹ This is a clear violation of the CEQA Guideline 15126.d, "Describe a range of reasonable alternatives to the project...which could feasibly attain the basic objectives of the project, and evaluate the comparative merits of the alternatives."

¹⁰ The guidelines specify that "[i]f the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives." 15126.d.2

¹¹ Technical Report 5.6, 5.12.

impacts should then be compared to the environmental impacts of the proposed project.¹²

- o The inflated calculation of EBMUD's needs has made the direct replacement of terminal storage by other elements more difficult.
- o A cost/benefit analysis of each alternative and cost comparisons between the various options is necessary both for the Board and for the public.

(15)

Many options exist which could, alone or in combination, deal with EBMUD's water supply needs. Moreover, these could be used to reduce the size of reservoir storage selected. Those which could rely on a Sierra source exclusively have been marked with an asterisk. Some rely on the purchase of water from Central Valley agriculture. This purchase is quite feasible: enormous amounts are already up for sale. Phil Leveen presented evidence at the May 25th hearing indicating that water marketing may cost only 5% as much as terminal storage. The EIR should compare the cost of stockpiling water (as now proposed) with the purchase of water in time of need.

(10)

Security Options:

- o *interties (e.g. with San Francisco). The cost is split and thus low.
- o *an earthquake proof aqueduct across or around the Delta.
- o use of Delta water after salt intrusion has been flushed out.
- o *conservation and reclamation.
- o *keep terminal reservoirs fuller using pumping or a 4th barrel.

Drought Options:

- o *Conjunctive use programs: For example EBMUD could assist current users of ground water (municipal and agricultural) to utilize surface water in wet years with the understanding that they would pump in dry years, relinquishing that year's water allotment to EBMUD. This method would both reduce seepage losses and increase EBMUD's dry year allotment.
- o *Water Banking: EBMUD could assist in the recharge of ground water aquifers along the path of the Mokelumne River during wet years using settling beds. Then, in dry years the ground water could be pumped for local use giving EBMUD a greater allotment of that year's Mokelumne flow.
- o *Direct purchase of water in the Mokelumne and Tuolumne watersheds and wheeling through EBMUD or SF's pipes.
- o *Pumping of Delta water from Bixler to Camanche Reservoir to provide for downstream commitments. The difficulties and impacts associated with this year's eleventh hour attempt to utilize this option could probably be eliminated with a more careful approach and the preparation of an EIR.
- o Purchase of treated water from CCWD. EBMUD could contribute in advance to excess treatment capacity by CCWD for whatever amount is required.
- o EBMUD treatment of Delta water -- either running the water directly through the system or into storage reservoirs, where advanced treatment would produce high quality water. Los Angeles, with a system much like EBMUD's is running SWP water this summer, so Delta water can obviously be utilized without the \$370 million expense given by EIR.¹³

¹² For example, I have attached a letter from the Department of Health Services giving an estimate of the health consequences of occasional and temporary use of Delta Water due to THM's. The impact appears to be lost in the noise. This is not the impression one would get from reading the EIR section dealing with water quality (Technical Report: Chapter 4)

¹³ e.g. Technical Report 5.11. The EIR should give the assumptions behind the \$370 million figure. Also an analysis of DWP's success with Delta water this summer should be done.

- o *Conservation and reclamation.

Thus for example, the District could combine:

- o an earthquake aqueduct with the Delta/ Camanche pumping idea. Camanche pumping is inexpensive; the new aqueduct may be built soon in any event (due to rising demand and sale of surplus water to CCWD), thus the District would achieve all its objectives with no wasted expense.
- o an expanded intertie with San Francisco with an agreement to obtain treated Delta water in drought from CCWD (either buy water from CCWD or pay them to treat EBMUD water).

Many other combinations are possible. EBMUD has an obligation to seek out the most promising alternative approaches and to perform a good faith analysis upon their benefits and impacts. An EIR without these options is not legally defensible.

IV. Cumulative impacts

According to the CEQA Guidelines, "[C]umulative impacts shall be discussed when they are significant (15130.a), where cumulative impacts are defined as "the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects" (15355.b). Numerous projects planned both by EBMUD and other agencies fall within this definition (especially with respect to growth impacts and the loss of open space) and must be discussed but are not (EIR 11.2-3). The potential financial impact of these projects upon the ratepayers should be analyzed. Some of the projects with relevant cumulative impacts include:¹⁴

Reasonably foreseeable EBMUD projects:

- o The American River Diversion. It is stated Board policy to seek to divert water from the American River. In light of that policy it would be unreasonable if the EIR did not consider the impacts of this project. Moreover a recent recommendation by SWRCB staff makes the eventual success of the project somewhat more likely. This analysis is also required by Guideline 15165 on Multiple and Phased Projects: "Where and individual project is a necessary precedent for action on a larger project..., an EIR must address itself to the scope of the larger project." Additional terminal storage is clearly a necessary precedent to implementation of the American River diversion. Since the draft Staff Summary of the WSMP (3/3/88) indicated that "The use of [the American River] supply will require storage in addition to the storage discussed in the Security section of this Summary," then a fortiori, the current proposal for new storage is a necessary prerequisite to the American River diversion.

- o Future expansions of local storage. As indicated just above, terminal storage projects beyond the current proposals are contemplated and need to be considered.

- o EBMUD will likely seek to add a fourth barrel onto the Mokelumne Aqueduct, irrespective of the success of the American River project. This is because the

¹⁴ Cumulative impacts are given a scant four paragraphs (EIR 11.2-3). A Water Supply Management Plan Report is mentioned as having a discussion. I am not aware of any such document. It is not listed in the bibliography.

increasing need to pump (with increasing demand and because EBMUD plans to sell 50,000 af of water annually to CCWD) may make this cost effective.

- o EBMUD will likely seek to build an earthquake proof aqueduct across or around the Delta within the planning horizon.
- o EBMUD has a policy of selling surplus water to neighboring jurisdictions. An expansion in EBMUD's water supply could lead to an increase in such sales.
- o Construction of a Southern Aqueduct running along the Highway 580 corridor has been seriously contemplated by EBMUD.¹⁵ The impacts of such a reservoir should be included.

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Reasonably foreseeable projects by other agencies:

- o transportation projects
- o sewer expansions (e.g. the "super sewer")
- o water projects (e.g. Los Vaqueros (CCWD), Zone 7 projects)

Cumulatively, these projects would have significant environmental impacts, both directly and through their growth inducing impacts (see under growth inducing impacts below). EBMUD must include an analysis of the sum total of these impacts in this EIR. Also, the EIR should explain why massive local storage is needed for security when EBMUD admits that an earthquake proof aqueduct will soon be built anyway. Why not build a secure aqueduct immediately and save the expense and impacts a massive reservoir would entail?

V. Growth related impacts. The EIR fails to adequately discuss the direct and cumulative impacts of the growth associated with the WSMP.

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V. A. Scope. The EIR should include a detailed discussion of the growth related impacts growth associated with the WSMP.

- o Physical effects: loss of open space, air quality (both through higher emissions associated with stop and go driving and through the effects of additional cars), Bay and Delta water quality (through increased sewage). These physical impacts are "significant" under the CEQA Guidelines and must be attributed to this project.¹⁶
- o Infrastructure impacts: the impacts of the growth upon the transportation, sewage, waste, fire, police and other infrastructure systems which are vital to quality of life should be examined (Guidelines 15126.g).
- o Reference to numerous local general plan EIR's is inadequate as 1) the WSMP impacts will be regional as opposed to primarily local considerations of local EIRs, 2) local general plans are in a state of flux, and 3) EBMUD planning is admittedly only partially based upon local general plans. The EIR should also make clear whether its projected growth in demand exceeds that planned for by the jurisdictions in EBMUD.

¹⁵ See for example Discussion of Water Supply System Needs, February, 1987, p.8.

¹⁶ Guidelines 15064. "...the construction of a new sewage treatment plant may facilitate population growth in the service area due to the increase in sewage treatment capacity and may lead to an increase in air pollution." In the Guidelines Appendix G (section s), the "[extension] of a sewer trunk line with capacity to serve new development." is considered significant. Clearly, physical effects resulting from projects designed to service new growth can be significant. Considering the massive amount of growth the WSMP plan is designed to service, those impacts will be significant.

V. B. Growth inducement vs. removal of growth obstacles. The EIR attempts to make a distinction between growth inducing projects and projects which remove an obstacle to growth. This is an artificial distinction -- the CEQA Guidelines insist upon equal analysis of both types of impacts.¹⁷ Therefore, the EIR must discuss the growth related impacts in detail, regardless of what category it places the growth impacts into. (24)

V. C. Growth inducing impacts of the WSMP. The EIR improperly discounts the actual growth inducing potential of this project. Current Board policy limits ratepayers to risks of 39% deficiency. However, even using EBMUD's inflated figures, this level of backup would be achieved with 55,000 af of additional storage. Water storage beyond this level might be growth inducing in that water service could be provided which far exceeded the general plans of the jurisdictions within the District. This is true whether or not the EBMUD Board should vote to reduce the allowable deficiency to 25%. The allowable deficiency could always be increased by a simple vote of the Board after the reservoir is in place, freeing up enormous amounts of water for growth. Moreover, since EBMUD has unfairly downplayed conservation and ignored opportunities to increase the future yield of the Mokelumne system, the project would be growth inducing with even lower levels of additional storage. Moreover, growth inducement is not just a function of reservoir size. Buckhorn could feed the entire San Ramon area by gravity and thus would especially facilitate development there. This factor must be considered. (24)

V. D. Cumulative impacts. Future additions to the system -- interties, an earthquake proof aqueduct, the American River Diversion, a fourth barrel to the Mokelumne Aqueduct, additional local storage, the Southern Aqueduct, and expansion of the surplus water sales -- could have an enormous impact upon growth (which then leads to further physical impacts), not only within the EBMUD District, but within the entire region. Moreover, other agencies have planned projects which will contribute to the cumulative effects. EBMUD should examine the growth related impacts of these projects under various scenarios. (25)

VI. Los Vaqueros option is not yet defined.

CCWD has not yet finished the project level EIR on the Los Vaqueros Project. However, EBMUD's EIR purports to be a project level EIR on all three reservoir sites, including Los Vaqueros. This clearly cannot be true. Since Los Vaqueros is considered an option under this EIR, certification of the EIR must wait until publication and certification of the Los Vaqueros EIR. (32)

VII. The consequences of dam failure.

Estimates made by the USGS indicate that if Upper San Leandro failed, between

¹⁷ Guidelines 15126.g. "Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a waste water treatment plant might, for example, allow for more construction in service areas). Increases in the population may further tax existing community service facilities so consideration must be given to this impact..."

33,000 and 39,000 people would die in San Leandro.¹⁸ Buckhorn Reservoir would be situated just above Upper San Leandro and might hold 3.5 times as much water. Presumably, the loss of life would be well above even these horrific figures if Buckhorn were to fail. The loss of life from a failure of Pinole would presumably also be high. The citizens living below the reservoirs under consideration have a right to know the potential dangers to life and property which these reservoirs would entail. How many lives would be lost and what would be the economic damage which would follow the catastrophic failure of the proposed reservoirs? Mitigation of sorts should also be provided in the form of emergency evacuation plans for the affected areas. The possibility of landslides and floods affecting Moraga should also be examined for the Buckhorn site.

19

VII. Significant impacts. The discussion of significant impacts is hopelessly deficient and legally indefensible.

The concept of "significant impact" is at the heart of CEQA. It is defined as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, mineral, flora, fauna, ambient noise, and objects of historic or aesthetic significance..." (Guidelines 15382). Any impact or potential impact of the WSMF which falls into this category must be prominently identified as significant, both in the summary (Guidelines 15123) and in the body of the EIR.¹⁹ Mitigation for these significant impacts is to be included, of course, but the belief on the part of the authors that a particular impact is mitigatable does not release them from the obligation to highlight all significant impacts. Indeed when the lead agency approves a project covered in an EIR, it must make a finding for each significant impact, whether or not the particular impact is thought to have been successfully mitigated (Guidelines 15091).

On the contrary, this EIR downplays significant impacts throughout the document, and in fact attempts to confuse the concept of "significant impacts" with "unavoidable significant impacts". Both subjects are to be included, but the "significant" impact is far more important. The document goes so far as to create its own definition of what is significant, a definition which does not conform to the CEQA Guidelines.²⁰ The failure to properly include significant

¹⁸ Metropolitan San Francisco and Los Angeles Earthquake Loss Studies: 1980 Assessment. Steinbrugge et al., USGS. Open-File Report 81-113.

¹⁹ Guidelines 15126.a: "An EIR shall identify and focus on the significant environmental effects of the proposed project. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected.."

²⁰ EIR 11.2, 2.16 "In making the determination of significance it was assumed that to be judged "significant and unavoidable" an adverse impact would have to involve a permanent or severe temporary degradation in the

impacts as defined by Guideline 15382 and explained by Guidelines 15123 and 15126 is very serious and by itself renders this EIR inadequate. (19)

Impacts which must be considered "significant" include:

- o **Growth.** The physical impacts associated with the growth this project will service as well as a description of the growth itself (as given in Guidelines 15126.a,g). Cumulative impacts also need to be included in judging the size of the impacts. (see above, sections IV and V).

- o **Destruction of valleys.** By no stretch of the imagination could this be anything other than a significant impact, irrespective of the particular impacts enumerated.

- o **The exposure of people and structures to a major geologic hazard.** The potential impacts upon urban areas should the reservoirs fail must be considered a significant impact. This is implied by Guideline 15126 and given specifically as an example in the Guidelines, Appendix G (r).

- o **The impacts of the project upon a rare species.** According to Guidelines 15065, an impact which would "reduce the number or restrict the range of a rare or endangered plant or animal" is significant. This is reiterated in Guidelines Appendix G (c). The rainbow trout *Salmo Irideus* is a "rare" species under the definition in Guideline 15380. Note that a subspecies need not be included in state or federal lists to be considered "rare", but only need satisfy one of two criteria, most notably, "Although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens (15380.b.2.A: note that subspecies are also included in from section (a)). The EIR admits that this is a "unique" subspecies (5.76). It further states that "an unknown proportion of the spawning habitat would be inundated by Buckhorn Reservoir (EIR 2.9). Under these conditions of ignorance, it must be presumed that the affect of Buckhorn Reservoir upon the *Salmo Irideus* is significant. (23)

- o **Buckhorn Reservoir as a barrier to fish and wildlife.** According to Guidelines Appendix G, a project will have a significant impact upon the environment if it will "[i]nterfere substantially with the movement of any resident or migratory fish or wildlife species". Both *Salmo Irideus* and terrestrial wildlife would be significantly hindered by Buckhorn Reservoir. For land animals, the combination of Upper San Leandro and Buckhorn would make north-south travel difficult.

VIII. **Mitigation.** The discussion of mitigation measures is hopelessly vague and incomplete. (27)

According to the Guidelines, " [the] discussion shall identify mitigation measures for each significant environmental effect identified in the EIR. Where several mitigation measures are available to mitigate an impact, each

quality of the environment or the destruction of important natural and cultural resources that cannot be eliminated or substantially lessened by the incorporation of mitigation measures. Based on this criterion, most of the impacts associated with the WSMP Phase I are not judged by the authors of the DEIR to be significant." Note the confusion of "significant" with "significant and unavoidable". The "criterion" is a creation of the authors and does not reflect the CEQA Guidelines.

should be discussed and the basis for selecting a particular measure should be identified if one has been selected." (Guidelines 15126.c) It is clear that definite mitigations should be identified for definite impacts. By contrast, the EIR gives many vague promises about mitigation, but rarely specifies particular possible mitigations (and as mentioned above, many significant impacts are left out). For example, as mitigation for the loss of riparian habitat the EIR (5.94) proposes that "EBMUD should meet with representatives of the various resource and permitting agencies to initiate the permitting process. EBMUD should identify suitable areas for riparian habitat enhancement and/or development and present these findings to the agencies...". This is contrary to the letter and spirit of CEQA. Mitigation should be specified before, not after the draft EIR is presented to the public. Vague promises do nothing to provide mitigation nor do they give any assurance to the public or the Board that adequate mitigation is possible. Exact tracts of land which would be purchased and their character should be provided. For example, the EIR might suggest that Grizzly and Bolinas Creeks be dedicated to the EBRPD as partial mitigation for Buckhorn Reservoir. However, the purchase of land is not very satisfactory mitigation in that there would still be a net loss of habitat.

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IX. Unavoidable impacts.

All of the impacts mentioned under "significant impacts" are probably unavoidable if Buckhorn is built. Some may be avoided if Pinole or Los Vaqueros is chosen. All could be avoided with the proper set of alternatives.

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X. Short term uses vs. long term productivity

The EIR should include as a long term loss of productivity the evaporation from any new terminal reservoir storage facility. At Buckhorn for example the water loss could reach 3,000 af/year. This will reduce the average yield of the Mokelumne system the average flow down the Mokelumne River and the average flow through the Bay and Delta. This should also be included as a cumulative impact (EIR 11.3)

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XI. Conclusions

The scale of changes needed to make this document an adequate representation of the options available to EBMUD and of the impacts associated with those options are so great that the document will have to be resubmitted for public consideration, i.e. the public review process will need to be begun from scratch. AB 2583 (Goggin, 1985) requires public agencies to notice and recirculate a revised EIR if it includes significant new information.²¹ Also refer to Sutter Sensible Planning, Inc. et al. v. Sutter County Board of Supervisors et al. (122 Cal.App.3d 813), the court agreed that "the 'revised final' EIR should have been circulated for public and agency comment since it contains significant new information" (818).

Sincerely,



David Fullerton
Chair, Sierra Club Bay Chapter Water Committee

²¹ See CEQA...: preface, page v. The bill had not been incorporated into the CEQA statutes as of the date the reference was published.

1134 Euclid Ave., No. 2
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(415) 525-3463
May 25, 1988

Richard L. Kolm
Assistant Chief Engineer for Planning
EBMUD
PO Box 24055
Oakland, CA 94623

RECEIVED

JUN 17 1988

OFFICE OF PLANNING

Dear Mr. Kolm:

Last March at the scoping hearing for this DEIR, serving as a consultant in association with the Regional Parks Association and the Sierra Club San Francisco Bay Chapter Water Committee, I submitted a 23 page report entitled "EBMUD's Future Water Supply: Conservation . . . Not Reservoirs". In this letter I write simply to follow up on that report, to comment on how the current DEIR deals with the issues raised there. To accompany this letter, I resubmit that report into the hearing record. There is little if anything in the DEIR and Technical Report to substantially modify the conclusions I reached then.

At that time I presented data, based in large part on data included in the District's Urban Water Management Plan (UWMP) (adopted November 1985), showing that various conservation measures could save the District enough water to make a quite substantial impact on its future water needs. I suggested several additional measures as well, for which I did not give quantitative data, and suggested that through an integrated program of water management measures the District could avoid the need to construct new major storage.

It was my expectation that in accord with the legal requirements for an EIR these possibilities would be addressed in the DEIR. Unfortunately there are some severe deficiencies in the treatment of these matters.

1. The Urban Water Management Plan included conservation measures designed to save 4.5 mgd by 1990 and 20 mgd by 2020 (Table III-5, p. III-16). The present Technical Report presents a figure (Figure III-27, p. III-25) with identical numbers to the UWMP's except projecting drastically lower levels of conservation: 0.3 mgd by 1990 and 4 mgd by 2020, as well as somewhat lower projections of savings through water reclamation. The DEIR does not point these reductions out or give any plausible reason for them. In fact, it is legally required for the EIR to point out any divergences from the Urban Water Management Plan as constituting changes in District policy; these must be included as such in the project description, and the environmental impacts of such a proposed reduction in the

District's conservation program must be evaluated. (Similar treatment must be afforded to any other changes from existing District policy. It is not the responsibility of the public to wade through hundreds of pages of detail in order to identify what items therein constitute changes in policy.)

2. The DEIR gives very limited evaluation of various conservation measures. It projects much lower levels of achievable conservation than I presented in my report. Since I gave considerable documentation for my projections, in many cases based on the UWMP, the EIR must note and explain divergences from my arguments or from its own previous figures.

3. In my report I presented conservation as a component of an integrated water management program. The DEIR presents a conservation-only option, but it does not present a well thought out integrated plan of non-structural and low impact alternatives, as I suggested, and as has been proposed in greater detail by the Sierra Club. An EIR must consider viable alternatives; such an additional integrated alternative must be included, and it must be well worked out, not simply designed as a straw man.

4. One major mechanism which I discussed for achieving water conservation is through rate structure. This is discussed briefly in the Technical Report on p. III-11. The Report refers to the District's experience with elevation surcharges, and uses that experience to argue against the effectiveness of pricing as an inducement to conservation. In fact, there are major flaws in the argument given.

a. The chart (Figure III-14) shows that water use, aggregated between the two pressure zones affected, increased when elevation charges were instituted. Since it is known, however, that the number of customers also increased, the graph given is irrelevant. The relevant comparison would be usage per household or per capita, and this should be disaggregated by zone.

b. In my report (p.13) I discussed some of the factors that might make a price increase effective for conservation. The relevant considerations included good publicity, a dramatic change, and a major price difference in marginal rates. Since the cited experience met none of these conditions, it would be expected that it would have resulted in minor effects if any.

5. The DEIR rejects several measures on the grounds that adequate information is not available. The purpose of an EIR is to develop adequate information for choosing among alternatives, and therefore inadequate information is not an adequate reason for eliminating an alternative. Among

others, items in this category include pricing mechanisms, water audits, landscape consultations, landscape water use efficiency in new developments, landscape rebates, and pressure reduction. This is especially significant since studies on several of these are included as part of the District's current Water Conservation Program, but have not yet been implemented (DEIR, pp.7.2-4).

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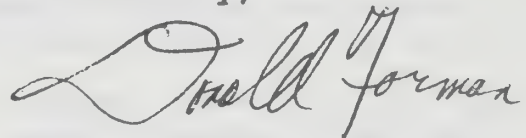
6. My report suggested interties with other local water agencies as a means of enhancing mutual security. The Technical Report (p. II-26) argues against interties on the grounds that "No utility has a significant long-term surplus that EBMUD can depend on for the required water quantity and outage time."

a. The argument of the TR is invalid. The point of interties is that it is mutually advantageous for utilities to share their risks in the event of disruption. This could mean for customers of one District to share some of the consequences of a disruption to another District's supply, in order to spare any one district from an intense deficiency. Such mutual reliance becomes even more appropriate under conditions where there is no surplus.

b. The TR gives no evidence to back up the claim that significant surplus is not available.

The changes suggested above are in many cases individually significant, and taken together, if conscientiously carried out, would result in a document that would be a substantially new document rather than merely a revision of the existing one. Therefore, the revised document, whether termed a Final EIR or a revised DEIR, must be recirculated with due notice, and the comments received must be replied to in the final document.

Sincerely,

A handwritten signature in cursive script, reading "Donald Forman". The signature is written in dark ink and is positioned below the word "Sincerely,".

Donald Forman



LEAGUE OF WOMEN VOTERS OF THE BAY AREA

An Inter League Organization of the San Francisco Bay Area

107

June 16, 1988

Richard L. Kolm
Assistant Chief Engineer for Planning
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

RECEIVED

JUN 17 1988

OFFICE OF PLANNING

Dear Mr. Kolm,

We are writing about the draft EIR and Technical reports on the District's proposed Water Supply Management Program.

As you may know, eight local League communities (Alameda, Berkeley, Diablo Valley, Hayward, San Leandro, Oakland, Piedmont and Richmond area) receive all or part of their water supply from EBMUD.

Leagues in the Bay Area and throughout the state share common positions on water resources management that were adopted after study and consensus by League members statewide. These positions include support of measures that:

- Promote the management and development of water resources in ways that are beneficial to the environment with emphasis on conservation and high standards of water quality appropriate for the intended use;

- Coordinate water resource planning with land use planning and provide for future needs without encouraging growth;

- Protect the natural environment in areas of water origin and water use;

- Reserve stream flows for protection of fish and wildlife habitat and other instream uses;

- Encourage offstream storage;

- Encourage a variety of water supply sources with emphasis on non-structural alternatives;

- Encourage conservation by all categories of water users through pricing policies, technical assistance, metering, education and changes in water rights law;

-Increase water conservation and promote wastewater reclamation to minimize reliance on water exported through and around the Delta.

Based on these positions, and the comments of League members who have reviewed the proposed WSMP, we urge you to add the following elements to the proposed Program:

1) Adopt and implement an inclining block rate structure for pricing of water to all users in all years. Determine and enforce a cap on high water use on all users in all years.

We are not convinced that water pricing will not achieve water savings, particularly following testimony in March 1988 by Dr. Bruvold of UC Berkeley that inclining block rates do result in water savings if the difference between the blocks is big enough. Revenue generated by inclining block rates in excess of the District's costs could be placed in the District's Water Conservation and Development Fund. (10)

2) Adopt and implement a stronger water conservation program, including:

- greater distribution of retrofit kits;
- a landscape rebate program;
- mandatory replacement of older, high water-using toilets when property changes hands.

Retrofit Kits. We believe the District can do better than 30,000 kits a year. This is only 6.6% of households per year. At that rate, it will take 15 years to reach the more than 450,000 households in the District, assuming door-to-door distribution of ALL kits, which is not indicated in the program.

The City of San Jose, on the other hand, is spending \$3.5-4 million for door-to-door distribution of retrofit kits to 220,000 pre-1980 households by November of this year. The City is servicing 50,000 households a year (22.7% of households per year and some 5,000 per week) with door-to-door distribution of all kits AND a follow-up visit to assist with installation if the customer needs help.

The kits include two all-brass showerheads; Teflon pipe-seal tape; two toilet tank dams; two dye tablets; installation instructions; a window decal for installation verification; and a brochure outlining how to detect and repair leaks.

According to Barbara Jordan, program manager for San Jose's Water Resources and Conservation Program, 92% of the households already serviced have installed the hardware. Water savings from this program are expected to be as much as 6-8 mgd. Combined with projected commercial and industrial water savings, the City's water conservation program will yield an estimated 12 mgd.

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We believe EBMUD can achieve a similar savings. Contact Barbara Jordan at (408) 277-5790 to find out more about developing and implementing this type of effort.

Landscape Rebate Program. Every-year inclining block water rates should provide adequate incentive for many residential users to think seriously about converting water intensive landscapes to those better suited to warm, Mediterranean climates dependent on an imported supply of water. Maximize this opportunity for water savings by including a well-publicized landscape rebate program as part of your program.

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Toilet Replacement. Toilets account for an estimated 42% of residential indoor water use. Clearly, there is an opportunity for significant water savings when older, high water consuming toilets are replaced with more efficient models. This cost could be born by the seller- similar to the seller traditionally paying for a termite inspection- at the time a property changes hands. Even when passed on to the buyer, this added cost still would be a small percentage of the total price of the home or business being purchased.

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3) Adopt and implement an aggressive public education campaign aimed at local planning commissions, city councils, county boards of supervisors and other land use planning agencies, stressing:

-the limitations of the District's water supply, generally and in time of drought. (Even with a new reservoir, water rationing at critical times still will be in the 25% or greater range by 2020.)

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-the need for cities and counties to exercise their land use planning authority to assist water conservation efforts by adopting and implementing landscape guidelines and regulations for new development, including single-family residential. (Requests for annexation within the Ultimate

Service Boundary in cities which do not have these guidelines and regulations should be given a lower priority by the District than requests for annexation in cities which do have them.)

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-requests for annexations outside the District's Ultimate Service Boundary will be denied indefinitely, as determined by the Board of Directors in April, 1988.

We believe the addition of these elements to the proposed WSMP will result in more efficient use of water, more realistic land use planning by cities and counties, and are necessary mitigations for the structural elements of the proposed program.

Regarding the terminal storage element of the proposed program, we agree that construction of an additional local reservoir has merit as a solution to the potential problems of aqueduct failure and prolonged drought.

6

However, construction of a reservoir at any of the proposed sites will have significant impacts on those environments, particularly riparian habitat, fish and wildlife.

Additional information on several points is needed and should be included as part of the final EIR and Technical reports:

1) Serious consideration should be given to participation with Contra Costa Water District in a joint reservoir facility. A comprehensive "joint project" alternative for construction of additional terminal storage should be included for public review as part of the final reports.

32

Cooperative agreements for water availability and/or construction of a single, shared storage facility in the East Bay would minimize the amount of habitat and resources lost in the region because of planned construction of multiple new reservoirs by neighboring water suppliers.

A joint project alternative has a number of advantages, in addition to those listed above. Participating water suppliers will be assured of an emergency water supply when they need it; impacts on the Mokelumne River and on the Delta in critical years will be minimized by drawing on stored water rather than further depleting instream needs when water quality- particularly in the Delta- is at its worst; multiple participants might be able to afford more effective mitigation measures than participants working alone; and

there probably would be cost savings for all districts involved.

Discussion of this alternative should include the benefits and drawbacks of a joint project; environmental impacts of a joint project; proposed mitigations for a joint project; financial cost of the project, including financing costs; and specific information on the quality of water that can be expected from a joint project AFTER PROPOSED TREATMENT IMPROVEMENTS if Mokelumne waters are blended with peak Delta flows.

2) How will EBMUD ensure that water from a new reservoir will be used "only during dry periods or during extended supply outages," as stated on Page 3-9 of the draft EIR, and not for growth outside the District's Ultimate Service Boundary? Could this be required as a condition of permit from all permitting agencies? (24)

3) Section 11.5 of the draft EIR mentions "a more secure water supply for one to two million people." Where does that "two million" come from and what does it mean? Does it mean that the population within the District's Ultimate Service Boundary will double within the life of the program?

4) What will be the cumulative impacts on residents, public services and the environment in Alameda, Contra Costa and neighboring counties of continuing to provide water to new development planned and approved by cities and counties? (25)

5) How, specifically, will the impacts of a reservoir on upland and riparian habitat, fish and wildlife- including rare species- and cultural resources, be mitigated? In most cases, particularly in the discussion relating to the Buckhorn site, the draft EIR tells us only that "specific measures" and/or "plans" will be developed. (27)

These measures and plans should be developed now and included for public review in the final EIR and Technical reports before approval of any project.

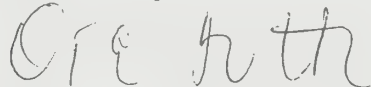
At a minimum, mitigation for habitat losses should be based on acre-for-acre, value-for-value replacement. There should be clearly defined goals for the type of habitat to be achieved. A monitoring and evaluation plan for the new areas should be developed and implemented for a period of at least five to 10 years. All plans and status reports should be reviewed by outside agencies.

6) What is the cost of the WSMP when the cost of financing is included? In the draft Technical report, costs are given in 1988 dollars only. Several program elements will require the sale of bonds, including Delta-related improvements, water treatment improvements, watershed acquisition and new terminal storage. What will be their dollar cost when financing is included? (15)

7) The draft Technical report states that the "estimated cost of the additional facilities necessary to treat Delta water is about \$370 million." III-39. That figure seems high to us. Please provide a breakdown ~~the~~ and the source of the information in the final reports. (11)

We appreciate your consideration of these matters. We look forward to reviewing the final EIR and Technical reports in the fall.

Sincerely,



Ora Huth, President

cc EBMUD Board of Directors
Jerome B. Gilbert, General Manager



DE LA SALLE INSTITUTE
SERVICE CENTER

SAINT MARY'S COLLEGE

BOX A-U, MORAGA, CALIFORNIA 94575

~~415-376-1845~~

FAX 415-376-1845

DATE: 3-17-88

TO: FB, MUD

ATTENTION: Richard L. Kolm 891-0623

of PAGES: 3

FROM: Fr. Michael Carey

DEPARTMENT: Pres. Office

ACCOUNT CODE:

PLEASE FAX BACK CONFIRMATION OF PRICES AND DELIVERY DATE

OTHER: P.O. #

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JUN 17 1988

OFFICE OF PLANNING



SAINT MARY'S COLLEGE OF CALIFORNIA
MORAGA, CALIFORNIA 94575 (415) 376-4411 OFFICE OF THE PRESIDENT

June 17, 1988

Richard L. Kolm
Assistant Chief Engineer for Planning
East Bay Municipal Utility District
Post Office Box 24055
Oakland, California 94623

Dear Mr. Kolm:

Thank you for meeting with members of Saint Mary's administration to discuss the Buckhorn Project and for inviting our comments on it.

Let me first address the substantive issue--whether the construction of Buckhorn Reservoir is the proper solution to the water supply problems perceived by EBMUD. Saint Mary's understands the responsibility that EBMUD has for supplying water of adequate quality and quantity to the people it serves. Still, without making a final judgement about the issue, we find the arguments presented by the San Francisco Bay Chapter of the Sierra Club persuasive. We hope that you will carefully consider their position before making a final decision about the Buckhorn Project.

If EBMUD does finally decide to build a new terminal reservoir, and if the Buckhorn Canyon site is chosen for it, Saint Mary's will likely be the site of the pumping station. The College will thus be intimately involved in the project. We will ask, then, that EBMUD take the following measures to mitigate the burden and inconvenience of the project which would necessarily affect Saint Mary's:

1. At the site of the pumping station, install a retention basin adequate to control water run-off from Las Trampas Creek, which runs through Saint Mary's campus to the Town of Lafayette.
2. Install the pumping station completely underground, or nearly so, and landscape the surrounding area in a park-like manner consistent with the adjacent and newly completed soccer/rugby complex.
3. Before trenching and installing the water line under Saint Mary's Road, coordinate the timing of this work with the College, so that it can be done during the summer months when College traffic is at a minimum. It is most important that this not be done during graduation ceremonies, when traffic is at its heaviest.
4. During the trenching of Saint Mary's Road, bury the overhead power lines from the pumping station to Moraga Way.

5. Replace any landscaping, curbing, fencing, irrigation and sprinkler systems or other Saint Mary's property which may be altered or damaged during trenching with similar materials of equal or better value.

We hope that this response to EBMUD's proposal will help you understand our position about the Buckhorn Project, and that we will have the opportunity for continued discussion with you about it. Thank you for understanding our concern.

Sincerely,

Fr. Michael R. Carey - op.

Fr. Michael R. Carey, O.P.
Assistant to the President

cc: Br. Mel Anderson, FSC
President of the College

Mr. Alan Holloway
Vice-President for Business and Finance

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JUN 17 1988

SECRETARY'S OFFICE

June 15, 1988

Mr. Stanford Skaggs, President
East Bay Municipal Utility District
2130 Adeline St.
Oakland, CA 94623

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JUN 17 1988

OFFICE OF PLANNING

Dear Mr. Skaggs;

The purpose of this letter is to register my objection to the Buckhorn Reservoir project.

My objections are on four grounds and I will list them in increasing order of importance. Please note that I am a resident of Rimer Drive, in Moraga, located not only next to Camino Pablo but also below it in elevation.

1.) Inconvenience during construction. While the estimates are for a 10 month construction period, we all know it will be closer to two years. No matter how hard you try to keep the rocks and dust down, my cars will not come out of this unscathed. Do we send a bill to EBMUD for every ding to the car bodies and paint? Also, time of travel will be definitely lengthened with one way traffic control. Far worse than the above, I can see Rimer Drive being used as a detour by trucks and buses during this period of "inconvenience". Rimer Drive is a quiet residential street with children playing and an occasional cat darting across the street. How many suits of killed or injured animals or (God forbid) children do you want to contend with?

2.) Threat to public safety. The restricted roadway will increase the response time for fire, rescue and police to the impacted area. More comment on the ramifications of this are not necessary.

3.) Threat of flooding in the event of fracture. The entire area below Camino Pablo down to and including Rimer Drive would be innundated if the aqueduct were to fracture for any reason, including earth movement.

4.) Increased hydrostatic pressure. Being on an ancient river bed, the Rimer Drive area has a high water table. Most homes in the area have swimming pools. The tremendous weight of a seven-foot pipe filled with water at the higher elevation of Camino Pablo could conceivably increase hydrostatic pressure in the area to the extent that the pools would be forced upward out of the ground. Even if EBMUD were to excavate my yard and build a new pool to my specifications at no cost there would be

16

no adequate compensation for the aggravation and
"inconvenience".

A fifth concern is the obvious loss of market valuation and
desirability of homes in the area.

Summing up, please reconsider and build the reservoir where
there is less of a population to be endangered and
"inconvenienced". If you hadn't noticed, the quotation marks
are from the future signs and notices we will be seeing if you
go ahead with this.

Sincerely,



Jack P. Grant
1295 Rimer Drive
Moraga, CA 94556

Al Silbert
P.O. Box 312
Orinda CA. 94563.
6/16/88

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JUN 17 1988

The F.B.M.U.D. Board of Directors:

OFFICE OF PLANNING

Subject: The water supply management program P.E.I.R.

The draft E.I.R. is deficient for the following reasons:-

1) P 2-3 Quote "a separate environmental assessment of the Los Vaqueros project has been prepared by Contra Costa County water district."

32

No where is there an in-depth analysis of this report. Such an analysis could show ~~that~~ Los Vaqueros reservoir to be a superior alternative to Buckhorn

21

2) P 2-15 2.2.10 first paragraph. Quote "if a catastrophic failure of Buckhorn were to occur etc. etc. -- to San Leandro area."

There is no analysis to show the consequences of a failure i.e. economic losses, lives lost, liability losses, cost of a replacement dam, how long would it take to replace dam. etc. A separate discussion on dam failure will be provided later.

24

3) P 2-17 First paragraph. There is a discussion on the growth inducing effects of Buckhorn, but vital information is left out.

Buckhorn by its size - it has the same capacity as all the other terminal reservoirs put together - and poised to serve by gravity flow to a high

24 growth area of San Remon, Danville, Tassajava area, will by its very location induce growth.

This represents a subsidy by present ratepayers to the developers, and future customers.

10 4) Note that the conservation by existing customers since the 1976-77 drought enabled the district to add 35,000 new households to the detriment of existing ratepayers, because it has repeated the cycle of severe rationing in the present drought situation.

2 5) The D.E.I.R. is deficient because it has not provided an analysis of the quantity of water supplied to customers outside its boundaries, such as Brentwood Contra Costa Water District etc etc.

5 6) The D.E.I.R. does not tell us how many acres have been annexed, and how many services have been added in these annexed areas, year by year since 1970 — recent data — and why?

32 7) p 3-10 Quote E.B.M.U.D. is currently performing technical feasibility studies on the preferred sites.

However, Buckhorn was without adequate discussion singled out as the preferred site.

C.C. water district is going ahead with Los Vaqueros. By sharing costs etc Los Vaqueros reservoir would make economic sense for EBMUD.

(7)

8) p 4-1 para 4.2 Quote "the aqueducts would be out of service for 4 to 17 months."

This statement is not substantiated. For example it does not show that a dire emergency could be declared by the governor and/or the President of the U.S. and federal help would be on the way.

F.E.M.A. funds would be available, the Corps of Engineers, and the U.S. army would help.

Temporary pipe lines would be laid to bypass the obstruction in no time flat.

In the last war in Europe with its devastation, can anyone cite a single case of a town being out of water 4 to 17 months?

(21)

9) P 4-2 para 4.3.1 Mokelumne aqueduct replacement Quote "maximum credible earthquake and floods without extensive damage."

This statement is meaningless, there should be a study to show what number on the Richter scale a dam is designed for and why?

With regard to floods, is it designed for 25 year 50 year or 100 year flood and why?

(11)

10) p 4-3. second full paragraph. Provides excellent arguments why building Buckhorn reservoir is overkill. It states that "additional water could be obtained from the Southern Delta, inexpensively but quality would be much lower than Mokelumne River water." In an emergency, and in a short time frame, who cares if they drink lower quality water. Millions of Southern Californians drink it

all their lives, with no apparent ill effects.

32) 11) p 5-11 Los Vaqueros facilities

Quote "C.C.W.D. is interested in a joint venture with EBMUD and other agencies", and "Los Vaqueros Reservoir would meet all three EBMUD water supply management objectives, although it is outside the District's service area."

Pardee is also outside the District's service area.

Why not Los Vaqueros? There are no facts to justify rejection. The price is right. There is potential for reservoir expansion, if provision is made initially in the dam design for heightening.

In case of dam failure, it will just flood the fields - the farmers will be glad of the water.

There is very little hazard to life and property, a very important point from the costs of liability insurance.

There is an assured sale of Mokelumne River water to another agency ^{C.C.W.D.} a revenue source.

It is not in a high growth area, thus not growth inducing, but its water can provide for growth elsewhere.

14) 12) p 4.2 para. 4.3.2. American River Aqueduct. ✓

The pending litigation in the allocation of American River water of 134 m.g.d. is running in EBMUD favor. The study requested by Judge Bancroft of the State Dept. of Natural Resources, says that the use

14

of 134 m.g.d. will not irreparably harm the environment.

This assured new source of supply means that there is no need for any new terminal reservoir. There is no proof to the contrary, and no analysis.

11

13) Technical Report 1-4. Comanche Reservoir.

Quote "This allows EBMUD to take its full allocation out of Pardie Reservoir."

Pumping of Delta water into the Comanche reservoir was only commenced under public pressure. This feature designed as a permanent solution, with increased pumping could certainly release a lot of water for residential users. Comanche reservoir — which is used for irrigation, was previously fed from the Pardie reservoir where we get most of our water.

The D.E.I.R. is defective, because it does not study the effects of this pumping to the Comanche reservoir.

It does not study the costs of pumping — after the first year drought — to keep the terminal reservoirs full versus the costs of building a new terminal reservoir.

It all boils down to the gravity of the situation as perceived by the management. It was not until February of 1988, that the district decided to pump water into its terminal reservoir. By this time it was too late.

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14) P 2-15 para 2.2.1.b. Quote "If a catastrophic failure of Buckhorn were to occur; however it

21

could be argued that Upper San Leandro and Chabot dams would fail as well, which would result in flooding of the more populated and industrialized San Leandro area.

21

Buckhorn reservoir is the most vulnerable to earthquake, because it is on a landslide prone area and the highest - 350 dam height.

Buckhorn is surrounded by faults, including the Hayward, Calaveras as well as the Miller Creek, Moraga, San Leandro Creek.

Buckhorn can fail because of a major earthquake. There are no dams that can be designed to be earthquake proof. It would be too expensive.

On the Richter scale, if the dam was designed for 7.5 and an earthquake of 8.5 occurs, which is 10 times the intensity of 7.5, - and it could happen - then the dam will fail.

20

Buckhorn could also fail because of a large landslide into the reservoir, causing an overtopping of the dam, by a huge wall of water, and excessive pressure on the dam wall.

21

Assume that Buckhorn will store 156,000 acre-feet, which with Upper San Leandro and Chabot could add to 207,700 acre-ft.

It is hard to visualize this huge amount of water.

It is equivalent to covering the approximately 100 square miles of San Leandro to a depth of 32.5 feet.

One can only imagine the widespread destruction and deaths that would occur, and the

liability lawsuits that would follow.

I would not like to be a director, and guessed wrong on this reservoir, and have it on my conscience.

I am no dam expert, but I do have serious reservations on Buckhorn, and I am concerned.

- (11) 15) Then there is the scare of trihalomethanes (T.H.M's). Chlorination as a means of water treatment has been around for decades. If in combination with organic matter it can form (THMs) - a suspected carcinogen - there are modern methods with ozone treatment and fine charcoal filtration to take out ^{one} contaminants.

FBMUD adds hydrofluosilicic acid at 1 part per million to its water. It is a known carcinogen, a highly corrosive and toxic substance, and a byproduct of the fertilizer and aluminum industry, and listed as a contaminant ^{by} the Environmental Protection Agency. This is done because it is alleged to be good for the teeth. However, dentists are still making a good living.

- (1) 16) Time does not permit a more extensive analysis of the D.E.I.R. and technical report which run into several hundred pages. The few weeks allowed by FBMUD for public comments is not enough.

I want it on record that I consider this a denial of due process under the law.

City of San Leandro
C.C. Sierra Club, Cities Defense League / Al Selbert.
for water, Town of Moraga.

Robert J. Gentilepersens
East Bay Municipal Utility District
P. O. Box 24055
Oakland, California 94622

RECEIVED
JUN 17 1988
SECRETARY'S OFFICE
OFFICE OF PLANNING

Gentilepersens:

I would like to state the following comments on your Water Supply Management Program Draft EIR of 4/88:

1. The purpose of CEQA (the law which mandates the EIR) is to protect the environment, by providing decision-makers with complete, unbiased information listing all feasible alternatives, so that they can choose the alternative that is most cost-effective in meeting the community's needs, while at the same time affording maximum protection to the environment, on which our lives depend. You have not provided an EIR, but a piece of propaganda calculated to favor only the most growth-inducing, environmentally damaging alternative. A number of facts demonstrate this: (a) The language you use is inflammatory, emotional language, rather than factual, scientific language: e.g. "severe rationing" and "intense water conservation measures", rather than simply "conservation". According to you, my normal, everyday lifestyle would be termed "severe" and "intense". It is neither, and I am certainly not suffering, as you would seem to be implying. (b) You tout a strong conservation program, although, as a customer of yours for the last 5 years, I have not been aware of any such strong program, other than an ad showing a nose that resembles a snake (relevancy?). PG&E has a REAL conservation program, which you should examine and emulate. They paid for almost all of the insulation in my house! "Since beginning its pioneering efforts in the early 1970s, EBMUD has had a proactive water conservation program leading the nation in water conservation education and the state in legislation" (from your OVERVIEW, April, 1988). This does not ring true. Have you educated people about low-flush toilets or 1-minute showers or suggested that they not wash their cars? NO. Have you offered to pay for new toilets or shower heads or drip irrigation systems? NO. (c) Your SUMMARY, April, 1988 does not list Conservation among the "Key Issues Affecting Water Supply". You obviously think conservation is a nuisance invented by extremists (like me?) to restrict our economy and lifestyle. If so, then you are simply not aware of today's ecological realities. I suggest that you read GAIA: An Atlas of Planet Management. (d) As pointed out by Earth First!, Director Skaggs is an attorney for Blackhawk. An attorney for one of the worst water-wasters (Blackhawk homesites include numerous golf courses) and environment-wreckers (Blackhawk destroyed a large area of wildlife habitat bordering on Mount Diablo Regional Park, including habitat for endangered species such as the Alameda Striped Pacer) cannot be impartial, and should resign, or at least not vote on this issue. (e) It is just too much of a "coincidence" that the alternative you recommend coincides with the desires of all of the rich developers in Contra Costa County (e.g. Blackhawk) who bankroll the pro-growth elected officials (who have told me, by the way, that the environmental route would be "political suicide"). You say that the added water storage would "only be used in an emergency", but with all the development going on in the area, and pressure for more, this is not believable. (f) You make totally irrational arguments against conservation: "One effect of a long-term conservation program is to reduce the District's ability to respond to a drought with short-term demand reduction measures"

(p.11-24). In other words, "Don't save water now, because then we won't be able to save water later, after we let development continue too far." (g) In order for your assertions to be relied upon, you should support them with EVIDENCE. You don't do this. For example, you say that an outage could last 13 months, but give no evidence (p.6-3). And you say that rationing would cause "long-term adverse impacts on the economy and lifestyle" (p.11-20), but offer no evidence. Personally, I have noticed no adverse effects on my own economics or lifestyle, so I would like to see your evidence. I don't have a swimming pool, but I do notice that those who do, rarely use them.

In short, you give every sign of being untrustworthy. If someone approached me to buy a used car, and used similar language and tactics, I wouldn't buy it. Neither would you, if the truth be told!

2. You say that a flood or earthquake could cause a 13-month outage. I find it very hard to believe that it would last this long. You call it a "reasonable assumption" (p.6-3), but you offer no evidence.

3. You say that a 71% reduction in water use would be needed to handle the 13-month outage (p.11-20), and that this would be, essentially, impossible. However, a 2-year reduction of 35% would take care of this, and a 35% reduction just happened last month, as a result of your call for a 25% reduction! Since conservation will OBVIOUSLY become essential in the future, as our population continues to increase, why not PLAN AHEAD, and institute it now? It can only improve things.

4. Your estimates of the savings provided by conservation (7 MGD) are far too low: we just achieved a 35% reduction over last year, for the preceding month. 35% of 270 MGD (your projected 2020 demand) is 94.5 MGD!

3. I cannot "buy" a need for more reservoirs, until conservation measures are FIRST put in place, and our needs re-computed. One-minute showers (where one doesn't run the water except when it is needed), waterless toilets, waterless gardening, drip irrigation of gardens, and bans on lawn-mowing (to increase the survivability of the lawns), golf-courses, and car-washing, etc. are all good things and would not impair our economy or lifestyle in any significant way. Without such measures, no cry for more reservoirs will be believable.

23. 5. Scientists tell us (e.g., see GAIA:..., mentioned above) that destruction of our environment will destroy, or significantly degrade, all life on the Earth. And yet, the loss and disturbance of wildlife and endangered species habitat that these reservoirs will cause was not stressed in the EIR, and is apparently not considered very important. Loss of HUMAN habitat is considered important, but not that of other species. That is very shortsighted, as well as violating the law. A biologist at Academy of Science in San Francisco laughed at me, when I asked why the Alameda Striped Racer couldn't be transplanted to another area, to save it. THESE RESERVOIRS WOULD DESTROY HABITAT, AND THAT HABITAT COULD NOT BE REPLACED! AND, OF COURSE, EXTINCTION IS FOREVER!

There are many other reasons why the reservoirs should not be built, but LACK OF NEED and DESTRUCTION OF OUR PRECIOUS NATURAL ENVIRONMENT are sufficient reasons.

Respectfully yours,

Michael J. Vandeman

Michael J. Vandeman, Ph.D.

cc: Alameda County Board of Supervisors
Contra Costa County Board of Supervisors

Alameda County, #4E750R
Alameda, California 94583
January 11, 1988

Office of Engineering
East Bay Municipal Utility District
P. O. Box 24755
Oakland, California 94621

Gentlemen:

Thank you for keeping me informed via your recent pamphlet, EBMUD: Quality, Access, Security. Here are my comments:

1. This appeal is a thinly veiled plea for more water for big developers in Contra Costa and other counties. By your own figures, your existing reservoirs hold enough water for 4 months of normal use. It is obvious that there is a HUGE amount of waste in water use, particularly in showers (I only use water to get wet and to rinse off; most people leave the water running throughout their entire shower), inefficient toilets, and in the watering of our absurdly wasteful LAWNS. Let's say that the waste is 75%. Then those 4 months extend to 16 months, which is just about equal to your MAXIMUM (read: "exaggerated") time to repair the pipelines.

2. You should use PG&E as your role model. A few years back, they said the same thing you are saying, about electricity (there was a book written about it; I forget the title). Then a few guys, with some simple calculations, proved that CONSERVATION alone would take care of all of our electricity needs far into the next century. They dropped all of their plans for new power plants, and have been talking about conservation ever since, as if they invented it. You only talk about conservation, if at all, when there is a drought scare. Are you really so short-sighted? The time for conservation is NOW, before we destroy any more wildlife (including human) and plant habitat. The very fact that you build aqueducts in precarious places shows how environmentally far out on that limb we are. Nature is merely telling you gently that YOU ARE OUT OF YOUR MINDS! How will covering all of our recreation lands with water improve our quality of life? About as much as covering it all with freeways.

Let Blackhawk and everyone else replace their lawns and golf courses with native species that don't need watering. Since I stopped watering and cutting my lawn, it now looks better than ever. Stop trying to be another Chamber of Commerce, and protect our precious resources, as you are supposed to do.

The only "long-term security" is in conservation, as the Indians proved long ago.

Respectfully yours,

Michael J. Vandeman

Michael J. Vandeman, Ph.D.

cc: Alameda County Board of Supervisors
Contra Costa County Board of Supervisors

June 17, 1988

Mr. Richard L. Kolm
Assistant Chief Engineer for Planning
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

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JUN 17 1988

OFFICE OF PLANNING

Subject: Water Supply Management Program Technical Report and EIR

Dear Mr Kolm,

I am a resident in the service district and have read the Technical Report and Environmental Impact Report concerning the proposed Water Supply Management Program. I would like to ask some questions and make some comments about the reports. The Technical Report is emphasized in the first part.

10 First indicated on page I-4 is the "unusable" storage of 17.5 KAF in the exsisting terminal reservoirs. In the event of an emergency or severe drought there is no reason not to believe that this storage could and would be recovered using pumps. Not considering this amount as usable storage is ignoring over 11% of total exsisting terminal storage. Why is this amount not included in the planning process? If it were accounted for, could the size of a new terminal reservoir facility could be decreased?

7 On page II-14 are listed the maximum accelerations and credible magnitudes of faults located in the Delta vicinity. The source is listed as Converse, 1981. Based on figure II-12, the Antioch Fault is the only fault capable of producing high to very high levels of ground shaking that result in the longest outages. The United States Geological Survey Professional Paper #941-A, pp. A10-11, indicates that the magnitude of the largest historic earthquake on the Antioch Fault is 4.9, which is less than the maximum credible earthquake of 6.5 listed for the Antioch Fault. Why is the maximum "credible" earthquake so much larger than the largest historical earthquake? A smaller magnitude earthquake would tend to produce smaller

7

accelerations, which would result in an outage of shorter duration than the 13 months used in the Technical Report, which in turn could significantly impact the proposed Water Supply Management Program. Is the Converse report available for public review? If it is not, why not?

Page 11-15 says that Aqueduct No. 1 is not securely fastened to its supports, which implies that Aqueducts Nos. 2 and 3 are securely fastened to their supports. This appears to be a contradiction of what is printed on page 11-8, which says none of the aqueducts are attached to their supports. Are they or are they not attached to their supports? If not, why couldn't they be attached securely enough so that in the event that the aqueducts were submerged, they would not break free of their supports and continue to operate? This appears to be a viable solution to submergence-induced failures. How long could the Aqueducts be submerged and continue to operate?

Page 11-21 talks about levee and foundation improvements. It says that improvements could be done that would substantially reduce extended outages, but that these improvements are "not feasible because such levee reinforcement and foundation improvement technology is only conceptual and unpredictable." Specifically what are these technologies and why are they considered not feasible?

11

The use of Delta water is an option not thoroughly studied. Page 11-23 indicates that a major disadvantage of using Delta water in emergencies is that a new treatment plant would need to be built at a cost of \$370 million. I do not understand why an entire treatment plant needs to be built. Why couldn't a partial treatment plant be built to partially treat Delta water to make it more compatible to the existing treatment and delivery system? Can an existing treatment plant be modified or added to accept Delta water?

Furthermore, the \$370 million estimate is for a plant with a capacity of 170 MGD. It does not seem reasonable to believe that EBMUD would ever use anywhere near that amount, even in a drought, given its reluctance to using Delta water. What is the reasoning behind such a large plant? Where does

170 MGD come from, and for comparison purposes, how much water did EBMUD take from the Delta in 1976-77? EBMUD could use Delta water if it was prepared to do so.

Page III-22 lists the Demand Reduction in Drought in Figure III-23.

4 What is the actual basis for these numbers? Is the source of these numbers available for public review? Another concern with Figure III-23 and the report is the use of a 25% demand reduction. If a 31% reduction is achievable in 2020, why is that value not used in the planning process? It seems imprudent not to use that value in long term planning. If 31% can be achieved, what reason is there to use a lesser figure other than to decrease hardship during rationing?

3 Figure III-24 on page III-23 is misleading. The 25% reduction supply availability curve indicates demand outstripping supply around 1990. This is misleading because in 1990 a reduction of nearly 35% is achievable, moving the supply availability curve to the right, closer to the 39% reduction curve. In this case, demand will not exceed supply availability until about the year 2000, which makes the situation more realistic and less urgent than EBMUD makes it appear.

4 I question the integrity of the report. As an example, pages III-23 and 24 state that "...additional terminal storage or additional supplies are needed to ensure that customers do not have to reduce demand during a drought by more than 25 percent." This statement totally ignores current EBMUD reduction policy and implies that it is just a formality until the Board adopts a 25% reduction policy. While it may be true that a 25% reduction may become EBMUD policy, reports available for public review should contain current policy.

4 Figure III-27 on page III-26 projects water demand in 2020. I question the validity of the projection. First, what is the purpose of the +10 MGD variance for weather and other conditions? Is it to include extra standby for dry periods? This does not make sense considering there already exists a standby for dry periods (Figure II-22) and that the object of the current WSMP proposal is to ensure a reliable supply of water into the future, even

4 in conditions of drought. The next problem is with the unaccounted-for water. Currently, 7.3% of water consumption is unaccounted for (page III-7). The projections indicate that the unaccounted-for water percentage will increase to about 12.3% in 2020. Given that EBMUD is continually replacing broken pipe with new pipe that is less vulnerable to breaks, the increase does not appear justified. Furthermore, page III-7 even says "...the system has a declining leakage factor." Why is the unaccounted for water percentage expected to climb? The third problem with the projection is the value used for water reclamation. "Projects that may replace ... 5 MGD of freshwater supplies are being evaluated" (page III-35), and the 5 MGD is accounted for in the projection. However, this is the only reclamation savings accounted for. To assume that no other reclamation projects will become feasible in the next 32 years is a poor assumption. Does EBMUD anticipate no more reclamation projects will occur in the next 32 years other than the 3 projects presented in the Technical Report?

8 A major omission from this report is operational costs over the life of the projects studied. What will be the annual operating and maintenance costs of a new terminal reservoir? Of a new aqueduct? What is the cost of adding about 170 feet of head to 100 MGD as would happen at Pinole Reservoir (V-23)? What is the cost of adding about 510 feet of head to 105 MGD as would happen at Buckhorn Reservoir? Or about 520 feet of head to 150 MGD as would happen at Los Vaqueros Reservoir?

15 Again I question the integrity of the report. The cost of reservoir filling is often ignored or only mentioned in passing when comparing costs of the various alternatives. The \$17.4 million dollars to fill Buckhorn Reservoir is a substantial amount of money, especially when compared to the \$3.8 million estimated for Pinole Reservoir. By not including this amount when comparing alternatives, the cost of the terminal reservoir alternative chosen appears cheaper than it really is.

15 Concerning other costs, do the capital costs of constructing the reservoirs include the cost of the required new pumping plants and pipelines, or the cost of relocating PG&E transmission towers? Are the costs of environmental mitigation programs included? I know a report

completed for EBMUD, by Converse Consultants I think, examined the Delta region and presented annualized costs of numerous options of new aqueducts. Were annualized costs determined for the terminal reservoir alternatives for comparison purposes?

(14) If and when EBMUD is allowed to remove water from the American River, will a new aqueduct be built to deliver the water? Given that the current Mokelumne Aqueducts can just meet EBMUD's entitlement, the possibility of a new aqueduct seems reasonable. Also, in the event of severe damage to the Aqueducts, what is the estimated cost of repairing the damage? How long would it take to build a new aqueduct across the Delta? What are the chances that, in the event of severe damage to the Aqueducts, a new aqueduct will be built rather than repairing the damaged aqueducts? (What I'm driving at is that a new aqueduct appears likely to be built in the future. Instead of spending money on building, maintaining and operating a relatively large new reservoir, and possibly spending money repairing the existing aqueducts should they fail, why not build a new aqueduct now? (7) The Technical Report even says a new pipeline could provide secure delivery of Mokelumne water. A secure supply would decrease the size and need of a new terminal reservoir.)

The California Department of Water Resources, Report 192-82 estimates the cost of improving the levees around the islands that the elevated portion of the aqueduct crosses (Upper Orwood, Orwood, Palm, Woodward, and Upper and Lower Jones) would cost \$68.7 million dollars. The probability of levee failure after these repairs would be less than 1 in 100. Has EBMUD investigated the possibility of sharing levee repair costs with other concerned parties like Federal, State, County and Local governments, Delta farmers and other water users, and the Santa Fe Railroad Company who's line parallels the Aqueducts? What is the cost of improving the aqueducts to a point where, if the aqueducts were damaged by an earthquake, the repair time would be equal to the existing standby used at a rationed rate? Or what is the cost of foundation improvements for just one of the Aqueducts? By fixing up one of the Aqueducts, a reliable supply of water will be available. By increasing security, the longest outage would be decreased, decreasing the immediate need for a terminal storage. A

combination of levee improvements and one Aqueduct with foundation improvements could be a viable solution.

10 If the security problem were solved, could Pardee Reservoir storage be considered as a supply for shortage? Pardee Reservoir is 135% larger than the combined total of the exsisting terminal storage facilities, and is a large amount of water to ignore. Pardee Reservoir is mentioned briefly in Chapter One.

7 What are the estimates for water supply outages due to damage to the Mokelumne Aqueducts are based on? Are the estimated outage durations in the Technical Report long enough to repair all major damage resulting from an event, or to repair one aqueduct completely to get water flowing, and then fixing the other aqueducts if more than one aqueduct were damaged? For example, if the aqueducts were damaged by ground motions of 0.2g, resulting in EBMUD's estimated outage of 13 months, could water be supplied to the service area in less than 13 months if one aqueduct was concentrated on and fixed before the others? If so, then water could be supplied in less than 13 months, and the 13 month outage is really less than 13 months. This would have a profound effect on the WSMP proposal.

10 One of the arguments in favor of a terminal reservoir is to reduce the cost to water users of lost landscaping during drought or emergency outage. What was the average cost to water users of lost landscaping in the 1976-77 drought compared to the average cost to water users of building a new terminal resevoir? If the average construction and maintenance costs of a dam exceed the average cost of lost landscaping, it would appear that the costs outweigh the benefits and it would be cheaper just to pay people for their lost landscaping. Maybe EBMUD could implement mandatory "landscape insurance" to collect monies to pay for lost landscaping in the event of a shortage or drought.

10 One of the arguments against the use of pricing to control water consumption is that water use was not affected in higher elevation areas when customers in these elevated areas had their rates increased. The rate increase, however, resulted in a monthly increase of about \$4 to the average

residential customer. A \$4 rate increase is an insignificant amount of money in most anybody's monthly budget and is not likely to affect consumption. EBMUD should consider a more aggressive pricing policy that would be more likely to result in decreased consumption. Has EBMUD any such plans?

21 Some studies have indicated that the filling of reservoirs can "create" seismicity in areas not previously considered seismically active. Sites studied have included Oroville Dam and dams along the Colorado River. Given the existence of "inactive" faults in the vicinity of Buckhorn Reservoir (page 5-38) has the possibility if induced seismicity been addressed?

The following comments and questions originate from the EIR.

9 Page 3-1 talks about a decreasing supply availability from 252 to 222 MGD. On page III-16 of the Technical Report are the words "In most years, the full 325 MGD allotment is available" from the Mokelumne River. If in most years EBMUD can take 325 MGD from the Mokelumne, why is the "supply availability" only 252 to 222 MGD?

24 Page 10-4 says "...it is District policy that an unreasonable demand for service results if the District constructs major facilities needed to serve at no expense to the applicants. The district, therefore requires 'that applicants for water service shall bear the cost of major facilities capacity which must be planned, designed, and constructed to provide that service'". It could be argued that existing facilities meet current standby storage criteria and that security of supply could be insured to existing customers at a lower cost than constructing a new terminal reservoir. Therefore, a new terminal reservoir is being built only to serve future water service applicants and they should pay all costs incurred in constructing such a reservoir. Does EBMUD have any comments on this line of thinking? In dividing up construction costs between existing and future users for Buckhorn Dam, what rationale was used? How will the annual operation and maintenance costs be split? Are there any guarantees that all the anticipated future users will arrive and/or pay the costs and that the existing customers won't end up absorbing more costs than EBMUD says they will?

28

The following comments and questions are primarily informational so that I may better understand and evaluate the current situation.

13 Page III-40 says that obtaining Stanislaus River water from New Melones Dam is not feasible. One reason given for not pursuing this option is that the water requirements of the river basin are projected to use most of the firm yield. What year is the projection to and where can this projection be referenced? Another reason given for the unfeasibility is that some of the water has already been allocated. Does this mean the water is being used now, that it might be used in the future, or that it will be used in the future? Has the option of purchasing water rights from these users (or even users on the Mokelumne) been explored? It is my understanding that the Federal government is having great difficulty selling New Melones water and that it may go untapped for years to come (Geography 136 lecture at UC Berkeley, Fall 1987).

30 On page V-16 are the Usable Volumes for Pinole and Buckhorn Reservoirs. How is it that a much larger reservoir like Buckhorn has much less unusable volume than a smaller reservoir like Pinole? And why is it that the amount of unusable volume increases as Pinole Reservoir gets larger, yet the unusable volume remains constant as Buckhorn Reservoir gets larger? When a reservoir is drained, I assume all the water will run downhill to the same size "puddle" regardless of the reservoir size. Also, given an emergency or drought, this unusable storage is accessible and should be accounted for in planning processes.

The operation of Pinole Reservoir shown on page V-21 indicates that 40 MGD will be pumped from the Pinole Pumping Plant to the Sobrante Filter Plant. Can the water be pumped from San Pablo Pumping Plant? If the water must be pumped from Pinole Pumping Plant, why will the water's hydraulic head be raised about 110 feet higher than needed to reach Sobrante Filter Plant? This appears to be a waste of electricity and money.

19 Concerning reservoir detention time, will a new reservoir increase the average detention time of water in all the terminal reservoirs? If so, will

there be an increase in the level of mineralization of the water (page IV-5), and if so what are the effects of increased mineralization on health?

19

One of the arguments against building a Delta water treatment facility was that a large amount of money would be spent on a facility that would be used only in the event of an emergency (page II-26). How often would water being stored in a new terminal reservoir be used?

Is the 1987 report by Jacobs Associates listed in Appendix D available for public review?

19

What is the maximum depth of Briones, San Pablo, and Upper San Leandro Reservoirs?

15

A practical consideration concerning construction of a terminal reservoir is public resistance and the probability of lawsuits that will delay construction and increase costs. Has EBMUD addressed these possible delays and their impact on the WSMP?

After reading through the Technical Report, I feel that alternatives were rejected for unconvincing reasons and that the proposed WSMP presented in the EIR is not the best solution for the security/shortage/health and safety concerns. The staff should attempt to produce a less controversial proposal. I appreciate your taking the time to read through this letter and look forward to your response.

Sincerely yours,



Robert H. McClain
P.O. Box 40082
Berkeley, CA 94704

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JUN 20 1988

SECRETARY'S OFFICE

Rob Wells
808 E. Sussex Wy
Fresno, Ca. 93704

June 15, 1988

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JUN 20 1988

OFFICE OF PLANNING

San Francisco Bay Municipal Utility District
Box 24055
Oakland, Ca. 94623

RE: Comments on Buckhorn Reservoir Plan

Dear Sirs:

I strongly urge the utility to bend, fold and mutilate all plans for Buckhorn Dam near Moraga. Rocky Ridge and the surrounding oak dotted hills are a tremendous regional treasure that must be guarded in its current state at low costs.

The experience of living and visiting these hills is infinitely more valuable than your proposed reservoir. Like water, wild places in California are a rare commodity, and both must fiercely be saved. I grew up in these hills, and without getting too poetic or sappy, I'm convinced the place shaped my life the better. Open, wild areas have a beneficial affect on people that can't be quantified in a Hewlett Packard engineering calculator or a one-dimensional budget ledger. Rocky Ridge in its unspoiled state is priceless. (22)

The Buckhorn Dam is the wrong project in the wrong place at the wrong time. EBMUD must encourage serious conservation among its users through a combination of severe punitive rates for water wasters and an aggressive outreach and incentive program for water conservation. Further, the district must examine ways to conserve water through its delivery and storage system and seek water marketing agreements with pertinent agencies. The efficient use of water, not "water shortage," is the crux of California's water crisis. (10)

Indeed the state's current water shortage would be far less severe if EBMUD and its customers truly were conserving water. One example: during the 1977 drought, EBMUD handed out free water conservation kits to each house within its service area. But in this dry year, the district hasn't mailed out the kits. Instead it's telling customers to "come and get it." This is an atrocious attitude for a California water agency. EBMUD must invest the manpower and bucks for a year-round, wet-year and dry-year conservation program that means business. (10)

The Kaiser Creek and Buckhorn Creek Canyons shouldn't be flooded because of lazy, wasteful and ignorant habits of a large utility and its customers. The 1,100 acre "Lake Buckhorn" will kill the region's wild character and irreparably alter one of the last remaining vast wooded areas of the San Francisco Bay Area. This is a place where cougar can be found, red tailed hawks and innumerable varieties of native plants thrive. It is a spectacular network of canyons, and to borrow a phrase, an antidote to the Bay Area's increasingly dense urbanization. (23)

It was once said whisky is for drinkin' and water is for fightin'. Find a better way to manage existing resources and scrap Buckhorn Dam, or your utility will have one hell of a fight on its hands.

Sincerely,

[Handwritten signature] June 15, 1988

4 Merrill Drive
MORAGA, CA 94556
June 15, 1988

RECEIVED

JUN 20 1988

SECRETARY'S OFFICE

Mr Sanford Skaggs
EBMUD Board President
Oakland, CA

RECEIVED

JUN 20 1988

OFFICE OF PLANNING

Dear Mr. Skaggs:

We strongly urge that EBMUD give strong and favorable consideration to a reservoir site other than BUCK HORN CANYON. (29)

While recognizing the need for additional water reservoirs, we believe that the BUCKHORN site is too close to heavy population and creates an undue danger from earthquakes. The construction would also create considerable inconvenience and disrupt the safe passage of children to several schools. (9) (1) (16)

Thank you

Walter Thompson
Mayjaire Thompson

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JUN 20 1988

Mrs. E. JULIAN UNRUH
50 VIA HERMOSA
ORINDA, CALIFORNIA 94563

SECRETARY'S OFFICE

June 15, 1988

Mr. S. M. Sheggs, Pres.
& other Board Members
East Bay Mun. Ut. Dist
P.O. Box 24055
Oakland, Ca. 94623

RECEIVED

JUN 20 1988

OFFICE OF PLANNING

Dear Board Members —

I am a resident of the EBMUD
and favor additional storage to elevate
rationing — I hate carrying buckets of
water —

I urge you to vote YES for
Buckhorn or how Vequero — and
NO to an increasing block rate structure

Very truly yours,
Helen Unruh

(6)

OFFICE OF PLANNING AND RESEARCH

1400 TENTH STREET
SACRAMENTO, CA 95814



Richard L. Kolm
East Bay Municipal Utility Dist.
2127 Adeline Street
Oakland, CA 94623

June 16, 1988

RECEIVED

JUN 20 1988

OFFICE OF PLANNING

Subject: Water Supply Manggement Program - SCH# 87022413

Dear

The State Clearinghouse submitted the above named environmental document to selected state agencies for review. The review period is closed and none of the state agencies have comments. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call Loreen McMahon at 916/445-0613 if you have any questions regarding the environmental review process. When contacting the Clearinghouse in this matter, please use the eight-digit State Clearinghouse number so that we may respond promptly.

Sincerely,

A handwritten signature in dark ink, appearing to read 'David C. Nunenkamp'.

David C. Nunenkamp
Chief
Office of Permit Assistance

OFFICE OF PLANNING AND RESEARCH

100 TENTH STREET
SACRAMENTO, CA 95814

June 17, 1988

Richard L. Kolm
East Bay Municipal Utility District
2127 Adeline Street
Oakland, CA 94623

RECEIVED

JUN 20 1988

OFFICE OF PLANNING

Subject: Water Supply Management Program
SCH# 87022413

Dear Mr. Kolm:

The enclosed comments on your draft environmental documents were received by the State Clearinghouse after the end of the state review period. We are forwarding these comments to you because they provide information or raise issues which may assist you in project review.

Lead agencies are not required to respond to late comments. However, you may wish to incorporate these additional comments into the preparation of your final environmental document.

Please contact Loreen McMahon at 916/445-0613 if you have any questions concerning the review process. When you contact the Clearinghouse in this matter, please use the eight-digit State Clearinghouse number so that we may respond promptly.

Sincerely,

David C. Nunenkamp
Chief
Office of Permit Assistance

Enclosures

cc: Resources Agency

Memorandum

To : 1. Projects Coordinator
Resources Agency

Date : June 14, 1988

2. Mr. Richard L. Kolm
East Bay Municipal Utility District
2127 Adeline Street
Oakland, CA 94623

From : Department of Fish and Game

Subject : East Bay Municipal Utility District's (EBMUD) Draft Environmental Impact Report (DEIR) for Water Supply Management Program, Alameda, Contra Costa, and San Joaquin Counties (SCH 87022413)

The Department of Fish and Game (Department) has reviewed the DEIR for EBMUD's Water Supply Management Program, a project which entails development of an additional water storage reservoir. Three alternatives are considered: Pinole Reservoir (44,000 acre/feet capacity, 800 surface acres); Buckhorn Reservoir (78,000-143,000 acre/feet capacity, 1,200 surface acres); or Los Vaqueros Reservoir which is covered under another EIR which has not been submitted for review as part of this program.

The reservoirs would be filled through local runoff and transfer of water from the Mokelumne River through EBMUD's existing aqueduct system.

The Department's comments are as follows:

The DEIR is inadequate in its evaluation of impacts to fish and wildlife resources and habitats. Studies have not been completed to allow for identification of impacts to fish and wildlife habitat nor have detailed mitigation measures been developed for any of the sites. (23)

No identification of impacts on fisheries resources of the Mokelumne River has been made in the DEIR and in fact no discussion of impacts on the entire Mokelumne system is found anywhere in the DEIR. (23)

The Department has also not received the referenced DEIR on the Los Vaqueros alternative and cannot make any evaluation of potential impacts or of the adequacy of mitigation measures. (32)

Mitigation measures for loss of wildlife habitat contained in the DEIR are nebulous and allow no evaluation of long-term impacts. To merely state that unidentified district lands will be managed to benefit wildlife provides no means to evaluate potential losses and does not meet the requirements of the California Environmental Quality Act (CEQA). (27)

We recommend that the DEIR be revised following completion of studies which adequately evaluate impacts on all areas to be affected by the project. These should include detailed evaluations of changes in flow, water quality, and temperature in the Lower Mokelumne, changes in inflow and storage to Camanche Reservoir and impacts on operation of the Mokelumne River Fish Installation. In addition, terrestrial impacts in the proposed reservoir sites as well as all other project-impacted areas should be evaluated using the U.S. Fish and Wildlife Service's Habitat Evaluation Procedure (HEP) and a mitigation program developed to offset all adverse impacts based on HEP study results. (23)

The Fish and Game Commission policy regarding wetland compensation requires that the Department seek no net loss of either acreage or habitat value. A wetland mitigation plan should be developed to meet this objective, subject to the review and approval of the Department. (23)

The DEIR also should include an assessment of alternative means of conveying Mokelumne River water to the proposed reservoirs. Alternatives for assessment should include those that allow multiple use of the water by conveying it by the river channel to the Delta.

In conclusion, the DEIR is inadequate in its identification of project-caused impacts to fish and wildlife and their habitat and does not comply with the requirements of CEQA. The document submitted is so vague and incomplete in its treatment of fish and wildlife that it is impossible at this time to draw conclusions as to potential impacts. Necessary studies have not been completed at this time. Such studies must be completed in a scientific manner in order to properly identify and evaluate project-caused impacts. (23)

If the Department can be of further assistance, please contact James D. Messersmith, Regional Manager, Region 2, 1701 Nimbus Road, Suite A, Rancho Cordova, CA 95670, telephone (916) 355-0922.

D. R. T. M.

June 17, 1988

RECEIVED

JUN 17 1988

OFFICE OF PLANNING

Mr. Richard Kolm
Assistant Chief Engineer
for Planning
EBMUD
2123 Adeline Street
Oakland, CA 94623

Dear Mr. Kolm:

The comments below were made to the EBMUD Board of Directors on May 25, 1988. Please note the attached "Social impact of three reservoir alternatives" based on my analysis of the three reservoir sites."

By selecting Buckhorn Reservoir, EBMUD would choose the one terminal storage option with the most far-reaching and significant land use and social impacts. Population within a five mile radius of Buckhorn is more than ten times the size of combined neighboring populations proximate to the two other reservoir sites. As a consequence, Buckhorn is the only reservoir option which affects "sensitive receptors: such as schools, senior citizen residences and medical facilities. Furthermore, it is the reservoir option which most intensifies traffic congestion on heavily trafficked two-lane residential and urban roads. The draft EIR either ignores or underemphasizes these facts. Each point deserves careful consideration.

(1) "Sensitive Receptors". (A) Schools. The draft EIR indicates that the proposed Buckhorn Aquaduct could disrupt daily activities and impede access for at least ten months to three Moraga schools enrolling 1050 students ranging in ages from 3 to 13. At no point, however, does the draft EIR discuss safety considerations associated with the construction of a nine-foot trench proximate to the schools necessary to install the aquaduct. Furthermore, at no point does the draft EIR discuss the safety considerations associated with the significant narrowing of already heavily trafficked roads proximate to the schools. (16)

Moreover, the draft EIR is incorrect in stating that evening and summer activities do not occur at these schools. In fact, such activities regularly occur at each. (16)

(B) Senior Citizens. The draft EIR completely omits discussion of a senior citizen residential home located on Canyon Road in Moraga directly proximate to the excavation and construction of the aquaduct. The facility houses seventy persons with an average age of 76. The majority of the residents are ambulatory. Directly across the proposed excavated road are medical, dental, optometry and pharmacy offices used by these residents. At no point does the draft EIR discuss these issues. (16)

(2) Traffic. (A) Castro Valley. During the four year construction phase within the Buckhorn Canyon over 100 truck trips per day would be required through a hilly and partly residential area in Castro Valley. The impact of noise, congestion, safety and impeded access on the residents of this section of Castro Valley is not discussed in the draft EIR. Along this road is a school, a public library and a women's club. Neither of these sites are addressed in the EIR. (19)

Richard Kolm
Page Two
June 17, 1988

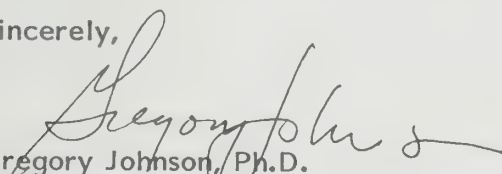
(B) Lafayette-Orinda-Moraga Areas. Construction of the reservoir, and its aquaduct will bring an indetermined number of trucks and vehicles hauling heavy equipment on to already heavily trafficked two-lane roads between Route 24 and Moraga. The most significant effects will be on Moraga Way between Orinda and Moraga and Moraga Road between Lafayette and Moraga. Each road is over-crowded during significant periods of the day. 16

The draft EIR fails to discuss the intensifying influence of the increased vehicle traffic on these already congested roads.

The discussion highlights a significant potential hidden cost of the project: If it selected Buckhorn Reservoir—clearly the most socially disruptive reservoir option—EBMUD has exposed itself and its ratepayers to significant liability risks. As a self-insured entity, EBMUD's ratepayers would ultimately bear the expense of bodily injury, vehicle and property damage claims as well as associated legal expenses. For example, during the 10-month construction of the aquaduct, school children will take an estimated 400,000 trips to and from school in close proximity to the construction site. Adding weekend, evening and summer a total of ½ million trips by 3 to 13 year old children will occur during the construction phase. A disabling accident to just one child with a life expectancy of sixty to seventy years will add 5-8% to the \$152 million price tag of the reservoir. These liability and potential hidden cost issues are not discussed in the draft EIR. I might add that Directors and officers liability insurance costs will also be an important factor in that Board directors may be personally sued if such a tragedy should occur. 15

In summary, Buckhorn Reservoir is just one more example of a project which looks great on a map (or an engineer's drafting table) but makes no sense from a human standpoint. Engineers and planners sometimes forget that human beings must live with the plans they create. This project exposes thousands of people to needless risks and hardships without demonstrating an equivalent overall benefit.

Sincerely,


Gregory Johnson, Ph.D.
1224 Rimer Drive
Moraga

cc: State Senators Nicholas Petris and William Lockyer
State Representative Johan Klehs
County Supervisors Mary King and Nancy Fahden

SOCIAL IMPACT OF THREE RESERVOIR SITES

<u>WITHIN FIVE MILES OF RESERVOIR</u>	<u>BUCKHORN</u>	<u>PINOLE</u>	<u>LOS VAQUEROS</u>
Population	25,000	5,000	100
Schools	5	0	0
Senior Citizen Centers	1	0	0
Medical Facilities	13	0	0
Libraries	2	0	0



Golden Gate Audubon Society

A CHAPTER OF THE NATIONAL AUDUBON SOCIETY
SERVING SAN FRANCISCO AND PARTS OF ALAMEDA AND CONTRA COSTA COUNTIES

119

15 June 1988

Richard L. Kolm, Assistant Chief Engineer
East Bay Municipal Utility District
Planning Division
P.O. 24055
Oakland, CA 94623

RECEIVED

JUN 20 1988

OFFICE OF PLANNING

RE: DRAFT EIR, Water Supply Management Program, April 1988.

Dear Mr. Kolm,

We would like to comment on some topics in the Draft Environmental Impact Report for the Water Supply Management Program.

The three proposed sites for reservoir storage are known to have native California habitat values which are rapidly decreasing in the State. Riparian areas in particular are very much reduced in California due primarily to water projects and flood control. Mitigation for riparian areas "to result in no net loss of in-kind habitat values" (Draft EIR 5-90) is unlikely, given the extent and value of these established historical ecological systems. We request that the EIR include with the plans of the proposed reservoir projects, plans for proposed mitigations which would offset habitat loss. It is disturbing to have language in the document such as, "...specific mitigation measures can be identified at some future date." (Draft EIR 5-93) In fact, mitigation may not be possible. If so, this should be understood before consideration of the proposed projects. Referral to EBMUD's Wildlife Management Plan as mitigation seems inappropriate. (Draft EIR 5-93) The proper place for mitigation measures addressing the projects presented in the Draft EIR is also in the Draft EIR. (27)

It is of concern to us that field surveys for all three sites (total of 3,760 acres) apparently were limited to three visits (EIR 5-62) of unspecified length during a limited seasonal period (April to July). Considering the scope of investigation necessary to assess the presence of some organisms, we feel strongly that the effort was not adequate. Each of the sites is considered to have appropriate habitat to host endangered and/or threatened species. Studies to insure the absence of these species should be conducted before any project consideration. The Draft EIR states, "Potential impacts to rare species are not expected to be significant or require stringent mitigation measures." (5-95) We counter that any impact to a rare species is significant, and must have stringent no-loss mitigation plans. (23)

AMERICANS COMMITTED TO CONSERVATION

1550 Shattuck Avenue, Suite 204 • Berkeley, California 94709 • (415) 843-2222

The plant and wildlife lists for the Buckhorn and Pinole projects are combined and do not include the Los Vaqueros project. We request that each proposed project have its own biological inventory. It is not clear what value a combined site list would have unless the authors are suggesting that all species on the list could be found at each site. The reference(s) for the plant and wildlife lists are requested to accompany the lists, as it is not clear how these lists were established. At least one year of regular observations should be made to establish seasonal residents of the sites. Only after a seasonal assessment of each site is made can any wildlife value comparisons of the proposed alternatives.

23

The lists seem also to have omitted some species which are known to be present in the undisturbed areas of the Oakland/Berkeley hills. A list of reptiles for Las Trampas Regional Park prepared by Richard W. Clinnick includes the following species in addition to those listed in the Draft EIR: Coast Horned Lizard (Phrynosoma coronatum), Rubber Boa (Charina bottae), Sharp-tailed Snake (Contia tenuia), Racer (Coluber constrictor), Night Snake (Hypsiglena torquata), and Western Rattlesnake (Crotalus viridis). Clinnick lists Spotted Skunk (Spilogale putorius) and Badger (Taxidea taxus) among the mammals of Las Trampas. (Knight, 1973) These animals are mentioned because Las Trampas is adjacent to the EBMUD property which includes Buckhorn Canyon. They share borders, trails, similar habitats and wildlife. Combined they provide a unique, mostly undisturbed urban wildlife preserve. We ask for comment on the impact to Las Trampas wildlife due to the loss of habitat because of the proposed Buckhorn project. Also, a few birds which would be expected at Buckhorn Canyon, but are not listed are Orange-crowned Warbler (Vermivora celata), Lazuli Bunting (Passerina amoena), and Horned Lark (Eremophila apesttris). Others such as Rufous-crowned Sparrow (Aimophila ruficeps), and Grasshopper Sparrow (Ammodramus savannarum) are found in similar East Bay habitats; the latter is known to be at Las Trampas. (pers. obs.) These additions are not to be considered to complete the lists. We are unaware of any thorough biological assessment of the project sites.

The "No Project Alternative" (4-1) suggests earthquake damage to aquaducts as a concern for temporary (4 to 17 months) interruption of water supplies. It is not explained why, during an emergency, repairs would take so long. What is the basis of this time schedule? We would also like to know whether the aquaducts have not been designed to withstand expected levels of groundshaking due to earthquake, as are the dams. And why there is warranted preparedness against aquaduct damage, and less concern about the consequence of reservoir rupture during a major earthquake. A rupture of the the proposed Buckhorn Canyon Reservoir, forinstance, would flood Upper San Leandro Reservoir, causing a possible chain reaction through to Chabot Reservoir

7

24

page three

with major threats to human life and property. The EIR needs to address the above questions in more detail.

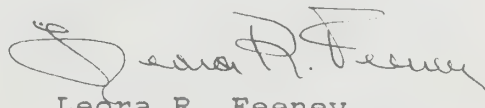
Siltation of Upper San Leandro Reservoir during construction of the proposed Buckhorn Canyon Reservoir is also of concern to us. We request information on the current capacity of Upper San Leandro Reservoir compared to its original capacity, and then the expected capacity after construction of the proposed Buckhorn Canyon Reservoir. Though negative impacts to Upper San Leandro Reservoir are discussed briefly (5-33), it does not address the issue with any quantification. It appears negative impacts could be significant. 19

That it is permissible to reduce the quality of water during the 4 year construction period (5-33), conflicts with the standards presented in Section 4.3.3, where EBMUD suggests that using the southern Delta water during an emergency "is inconsistent with its goal of providing customers with the highest quality water available". Please comment on this conflict of standards. 11

At this time we object to any proposal that reduces our natural resources, especially when there are alternatives (such as water marketing, multi-district interties, reclamation) that have not been explored or presented in detail. We would rather see money spent on water conservation incentives in our agricultural districts, and a major educational campaign about the costs of water waste to customers and the environment. We would like to see water districts become more sensitive to habitat losses and recognize the value of wildlife and native habitats to the character of our communities and the quality of our lives. Many of us are spoiled by the illusion that water can run freely forever from our faucets, sprinklers, and irrigation ditches without serious consequences. It is a dangerous illusion and has already created serious and costly environmental and political damage. We hope EBMUD can address the real water needs in the future with solutions that promote the most efficient use of water resources. If any district in this State has the customer support to be progressive and provide wisdom in the distribution of our water resources, we think it might be EBMUD. 10

Please forward copies of these comments to EBMUD board members.

Sincerely yours,



Leora R. Feeney
Conservation Committee
Golden Gate Audubon Society

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120

JUN 16 1988

SECRETARY'S OFFICE

412 Camino Sobrante
Grinda, Ca. 94563
June 16, 1988

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JUN 20 1988

OFFICE OF PLANNING

Mr. Sanford Slaggs, President
Members of the Board
East Bay Municipal Utility District
P.O. Box 24055
Oakland, Ca. 94623

Dear Members of the Board:

As a resident of the East Bay Municipal District, I
favor additional terminal storage. Please vote:

1. Yes for Buckhorn or Los Vaqueros reservoir.
2. Vote NO on unfair rationing where the burden is not
equally shared by all customers.
3. Vote NO to an increasing block rate structure.

3

Very truly yours,



Helen C. Richards
(Mrs. Gordon V. Richards)

121

City of San Ramon

2222 Camino Ramon
San Ramon, California 94583-1350
(415) 866-1400

June 16, 1988

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JUN 20 1988

OFFICE OF PLANNING

Richard L. Kolm
Assistant Chief Engineer for Planning
East Bay Municipal Utility District
Post Office Box 23055
Oakland, California 94623

RE: Comments on the Proposed Water Supply Management Program

Dear Mr. Kolm:

Thank you for the opportunity to comment on the Water Supply Management Program and supporting documents. The City of San Ramon offers the following comments on the proposed program:

General Comment

One major problem the City had in reviewing this report was the scale and general lack of detail of the EBMUD service area maps. As the report emphasizes that the objective of the plan is to provide security and maximize efficiency within EBMUD's existing service area, it is especially important to be able to distinguish exactly where the service area boundary falls. We raise this issue because it appears that there are significant portions of the City's planning area which are not within EBMUD's Ultimate Service Area. For example, San Ramon is currently developing a Specific Plan for the City's Westside, comprised of the City's western Sphere of Influence, which extends to the County line. We anticipate that the bulk of development in this area will be along the San Ramon Valley Boulevard corridor. We cannot determine from the maps in the document if this area is within the EBMUD's Ultimate Service Area.

5

Projections

In its consideration of projected water use, the Technical Report (Figure III-25) projects the population of San Ramon to grow from 25,500 in 1985 to 38,900 in 2000. This projection differs significantly with projections generated by ABAG and the City of San Ramon. The City's General Plan estimates a year 2000 population of 63,480; a General Plan Amendment now under consideration may raise this figure to 70,200. ABAG estimates a population of 55,400 for the year 2000. It may be helpful to note that at the present time, the City population is in the neighborhood of 30,000. Residential development that is currently under construction or in final states of development review will meet or exceed the year 2000 population projection contained in your report.

4

Richard Kolm
June 16, 1988
Page Two

As coordination between infrastructure planning and land use planning is crucial, we would suggest that EBMUD reevaluate the growth assumptions utilized in the Proposed Water Supply Management Program and revise them to reflect the City's projections.

Water Reclamation

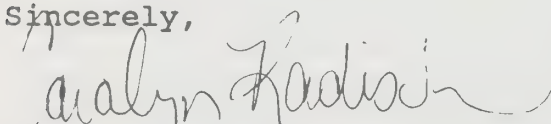
The City supports and encourages EBMUD to continue working to develop water reclamation projects in San Ramon. We anticipate that new development in the planning phases presents an important opportunity to implement a viable water reclamation system in San Ramon. (10)

Buckhorn Reservoir

If Buckhorn Reservoir is to be developed, we would urge the District to provide appropriate recreational access to the reservoir. We would encourage the District to work with the East Bay Regional Park District to extend trails to the reservoir from the Las Trampas Open Space Preserve. (26)

Thank you for the opportunity to review and comment on the proposed Water Supply Management Program.

Sincerely,



Carolyn Radisch
Associate Planner

CR/ds
planng/c754

cc: Richard T. Bottarini, Planning Director
Don Orr, Senior Planner



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

215 Fremont Street
San Francisco, Ca. 94105

17 JUN 1988

Mr. Richard L. Kolm
Assistant Chief Engineer for Planning
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

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JUN 21 1988

OFFICE OF PLANNING

Dear Mr. Kolm:

The Environmental Protection Agency (EPA) has conducted a preliminary review of the Draft Environmental Impact Report (DEIR) titled WATER SUPPLY MANAGEMENT PROGRAM.

Based on this review, we believe the project could constitute a major federal action, and therefore require the preparation of an Environmental Impact Statement (EIS). Because of the proposed program's wetland impacts, the District will likely require a permit from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act. Furthermore, in addition to eliminating a substantial amount of riparian habitat, the program could also significantly affect regional air quality by inducing growth. (19)

We recommend that you initiate the Section 404 permitting process as early as possible to avoid delaying any proposed program's implementation. We also recommend that the permit application and the EIS be processed concurrently to avoid duplication. (19)

We appreciate the opportunity to review this document. Please send us two copies of the Final EIR when available. If you have any questions, please contact me at (415) 974-8083 or have your staff call Harriet Hill at (415) 974-8193.

Sincerely yours,

Deanna M. Wieman
Deanna M. Wieman, Director
Office of External Affairs

CC: Army Corps of Engineers, San Francisco, Sharon Moorland
U.S. Fish and Wildlife Service, San Francisco, Louise Ac-
curso



June 17, 1988

RECEIVED

JUN 20 1988

OFFICE OF PLANNING

Richard Kolm
Assistant Chief Engineer for Planning
East Bay MUD, P.O. Box 24055
Oakland, CA 94623

RE: Water Supply Management Program

Dear Mr. Kolm:

The Danville Town Council is currently in the process of reviewing the Water Supply Management Program relative to the issue of terminal storage. This is a complex issue and our Council would like to spend some time reviewing all aspects of the issue before taking a public position.

I expect that the Council will adopt a position by the end of July.

I request that the record be kept open for Danville's written comments concerning the Water Supply Management Program and the issue of terminal storage. My direct phone number is 820-0154.

1

Thank you for your assistance.

Sincerely,

Linda Christman
Assistant to the City Manager

LOS VAQUEROS

► A Water Quality and
Resource Management Project.
Sponsored by
Contra Costa Water District.

CCN: 3341
EN 13.2.5

June 17, 1988

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JUN 20 1988

OFFICE OF PLANNING

Mr. Richard L. Kolm
Assistant Chief Engineer for Planning
East Bay Municipal Utility District
P. O. Box 24055
Oakland, CA 94623

Re: Draft EIR Water Supply Management Program

Dear Mr. Kolm:

Based on our initial review of the draft EIR, we have the following comments and observations:

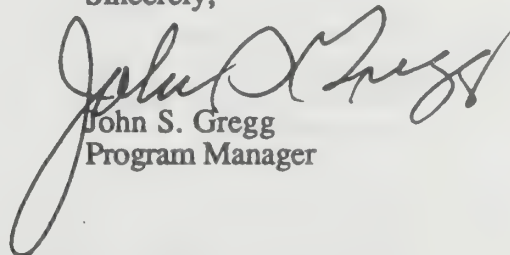
The report on page 5-11, fourth paragraph, references the Los Vaqueros draft Stage 1 EIR. It should be noted that the final EIR was published in August of 1986.

32

On page 5-28, acquisition of private property for a Los Vaqueros Reservoir is described as "a significant adverse impact...which would only be partly mitigated..." Contra Costa Water District believes that this can be fully mitigated. In approving land acquisition for the Los Vaqueros Project, the Board of Directors made specific findings as to the means of mitigating adverse impacts. That Board action is contained in District Resolution No. 86-34. Significant technical and environmental information are now available on the Los Vaqueros Project should East Bay wish to include such information in its final EIR.

I anticipate transmitting additional comments as quickly as our review work is completed.

Sincerely,



John S. Gregg
Program Manager

JSG:lm1



East Bay Regional Park District

11500 SKYLINE BOULEVARD, OAKLAND, CA 94619-2443 TELEPHONE (415) 531-9300

129

BOARD OF DIRECTORS
MARY LEE JEFFERDS, President
JAMES H. DUNCAN, Vice President
JOHN O'DONNELL, Secretary
HARLAN KESSEL, Treasurer
JOCELYN COMBS
KAY PETERSEN
TED RADKE
DAVID E. PESONEN
General Manager

June 17, 1988

Mr. Richard Kolm
East Bay Municipal Utilities District
P.O. Box 24055
Oakland, CA 94623

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JUN 20 1988

OFFICE OF PLANNING

Subject: Draft EIR for the Water Supply Management Program

Dear Mr. Kolm:

The subject project would not have an adverse impact upon EBRPD facilities, however, some of the discussion about mitigation for adverse impacts on fisheries involves habitat improvements on EBRPD lands. The EBRPD welcomes the opportunity to cooperate with EBMUD in such efforts and offers the following comments in order to clarify certain points and to assist in the identification of a complete range of potential habitat enhancement opportunities.

The discussion of trout (Salmo gairdneri) (p. 5-76) should be revised to note that the State Historic Landmark #970 marks the site from which specimens of rainbow trout were first gathered for scientific purposes (the animals themselves have no special official status). The discussion of spawning habitat (p. 5-77) would be clearer if it indicated the number of square feet of spawning habitat which would be affected. (23)

The discussion of mitigation for adverse impacts on the trout fishery (p. 5-95) could be augmented as follows: (27)

1. The provision of supplementary water flows to increase spawning habitat value could be carried out in both the east and west forks of Redwood Creek, and also on upper San Leandro Creek (see attached map). Since these creeks flow into the Upper San Leandro Reservoir, the only water loss involved would be due to evaporation.
2. The removal of barriers to migration could be accomplished where Upper San Leandro Creek is crossed by Pinehurst Road as well as where Canyon Road crosses Indian Creek.
3. Redwood Creek, Upper San Leandro Creek and especially the upper reaches of Indian Creek could be modified to increase their value as trout spawning and rearing habitat. This could be accomplished by increasing the size and frequency of permanent pools as well as by the placement of appropriate spawning gravel.

The feasibility of some of these measures may be limited by property ownerships. However, those measures which could be carried out on EBRPD property are consistent with the adopted Natural Resource Management Plans for Redwood Regional Park, Huckleberry Regional Preserve and Sibley Volcanic Regional Preserve. The EBRPD offers its full cooperation to assist in the selection of appropriate measures which will result in the preservation of our area's beautiful native rainbow trout.

If you have any questions, please contact either Pete Alexander, Fisheries Biologist, or the undersigned at 531-9300.

Very truly yours,

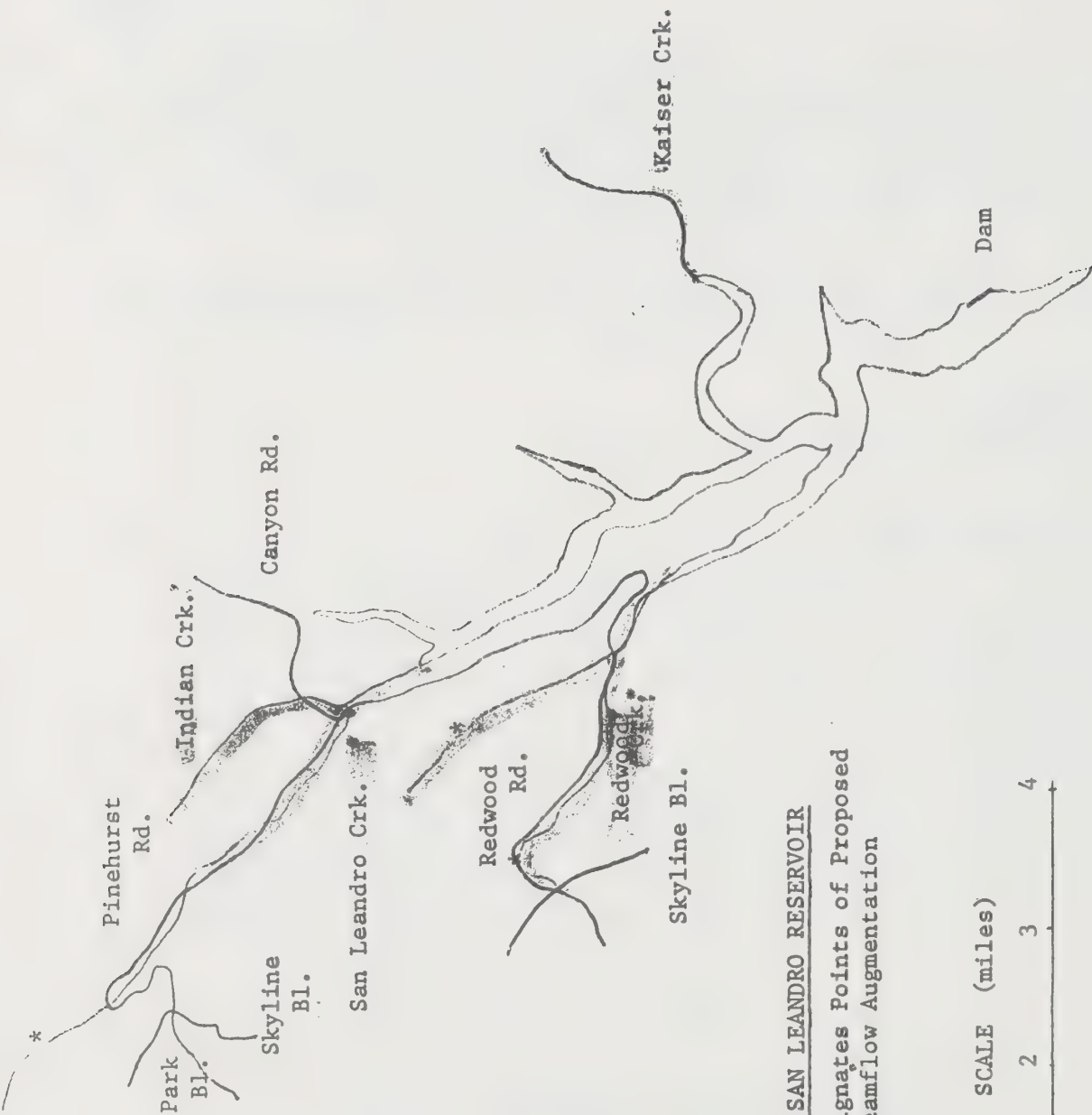


T. H. Lindenmeyer
Environmental Specialist

THL:ns

06-09-88THL/DSK011

cc: Jerry Kent
Tom Mikkelsen
Maxine Turner
Kevin Shea
Ro Aguilar
EBRPD Board



UPPER SAN LEANDRO RESERVOIR

* Designates Points of Proposed
Streamflow Augmentation

SCALE (miles)



July 1988

126

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

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JUN 20 1988

SECRETARY'S OFFICE

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

and

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.


3

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JUN 20 1988

OFFICE OF PLANNING

Very truly yours,



SIGNED

This magnificent oak and bay studded valley in the heart of EBMUD watershed land is threatened by construction of an unnecessary reservoir. Citizen initiative can prevent the loss of this urban wilderness on the edges of Oakland, Moraga, and Danville.

Mr. & Mrs. E. A. White
88 Miramonte Drive
Moraga, CA 94556

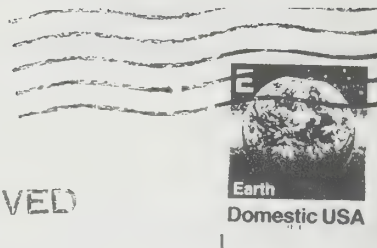
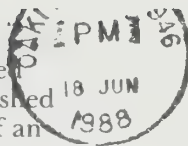
Definitely feel further studies of location should be made - this area is both unstable and too close to urban housing.

Mr Mrs White

You can help by joining the Buckhorn Canyon Preservation Council (B.C.P.C.)
c/o S.F. Bay Chapter Sierra Club
6014 College Avenue
Oakland, California 94618
415/653-6127

Photo: Bob Walker

Copyright © 1988, B.C.P.C.



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JUN 20 1983

SECRETARY'S OFFICE

*EBMUD Bldg Directors
P O Box 24055
Oakland Ca*

RECEIVED 94623

JUN 20 1983

OFFICE OF PLANNING

RECEIVED

JUN 20 1988
Dear board members

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JUN 20 1988

OFFICE OF PLANNING

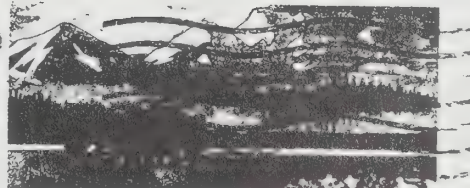
SECRETARY'S OFFICE

I'm sure I represent many other voters also when I say I hope we don't have to build a large expensive reservoir.

My husband and I hope more can be done with water reclamation.

I have heard that water from the Delta could be pumped to Comanche and stored for irrigation during drought. Seems an excellent idea. B. Pelt

11



America the Beautiful USA 15

EBMUD Board
P.O. Box 24055
Oakland, Ca. 94623



BUCKHORN CANYON PRESERVATION COUNCIL

6014 College Avenue, Oakland, CA 94618 415-653-6127

Richard Kolm, Assistant Chief Engineer for Planning
EBMUD, P.O. Box 24055, Oakland, CA 94623

Dear Mr. Kolm:

I am writing to express my opposition to the proposed Buckhorn Canyon reservoir project and the reduced emphasis EBMUD is placing on water conservation in the 1988 *Draft EIR*. The proposed Buckhorn Canyon project would cost the ratepayers nearly \$10 million per year over the next 30 years, while an effective plan to buy water rights from farmers during periods of drought would cost only \$100,000 per year (see testimony by Dr. Phillip Leveen at the EBMUD hearing on May 25, 1988).

Water conservation is one of the most cost-effective solutions towards reducing demand. The City of San José is currently implementing an accelerated water conservation program to save 12 million gallons per day (mgd) by the end of 1988 at a total cost of \$5.5 million (see handout). The residential part of their retrofit program was started in the summer of 1986 with the goal of reaching 216,000 households¹ and saving 6.5 mgd at a cost of \$3.24 million. San José has had a 92% retrofit success rate due to good program design² and follow-up. If a similar program were implemented by EBMUD the savings in residential water use would be 10 mgd at a cost of \$5 million. Annual savings to EBMUD residential ratepayers would be \$5.5 million on water bills and \$7 million on energy bills.

The 1988 *Draft EIR* states on pages 7-8 through 7-13 that retrofit measures by 2020 could only save 2.7 mgd which is about half of the 5.3 mgd that EBMUD was projecting in 1985 (see 1985 *UWMP*, pg. VI-18). The *Draft EIR* also revised downward the total estimate of savings from all water conservation measures to 6.9 mgd which is almost a third of the 18.1 mgd from the same 1985 *UWMP*. On page 7-14 the *Draft EIR* claims unproven or uncertain success of water conservation, and further states:

If the district undertakes an aggressive series of intense water conservation measures more rigorous than those employed in the U.S. generally or in Northern or Southern California in particular, the area would be perceived as having a long term water deficiency. It is unlikely that this would have a positive effect on the region's economy.

I question the technical accuracy of the *Draft EIR* regarding the potential savings from an effective well-designed water conservation program, and question why EBMUD contradicts its own estimates from the 1985 *UWMP*. The City of San José has implemented one of the most aggressive and successful water conservation programs in California in particular and the U.S. in general. EBMUD should examine a more aggressive state-of-the-art water conservation program, and prioritize each planning option on a least-cost basis. An effective well-planned water conservation program should be a higher priority than flooding Buckhorn Canyon.

Sincerely,

Robert J. Mowris
Senior Research Associate, Lawrence Berkeley Laboratory

B . C . P . C . Advisory Council

David Brower, *Director*
Earth Island Institute

Lucy Blake, *Director*
California League of
Conservation Voters

Richard Trudeau
Regional Parks Assoc.

Kathryn Petersen, *Director*
East Bay Reg. Parks
District

Harlan Kessel, *Director*
East Bay Reg. Parks
District

Malcolm Margolin
Author, *Publisher*

Ned Robinson
City of Lafayette
Councilmember

John Connors
City of Moraga
Councilmember

Susan Watson, *Director*
Save Mount Diablo

Robert Walker, *President*,
East Bay Trails Assoc.

Andrew Cohen
Seth Adams
California Water
Policy Group

(Organization names are for
identification purposes only.)

¹ Originally they were only going to target pre-1980 households, but careful studies showed that 40% of houses and apartments built before 1987 had showerheads that did not comply with the 1978 CEC standard of 2.75 gpm. San José petitioned the CEC, and new regulations went into effect on Jan. 1, 1987. However, a survey of 24 showerhead manufacturers during the summer of 1987 showed enforcement of the new regulations was lax.

² Each retrofit kit contained 2 chrome-plated brass showerheads (2.5 gpm) with on-off button, teflon tape, 2 stainless steel toilet dams, leak detection dye tablets, with instructions in English, Spanish, and Vietnamese, a sticker for the front window, and a postcard to send in for follow-up (cost was \$8/kit+\$3 labor+\$1 publicity+\$3 evaluation = \$15).

129
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JUN 20 1988

OFFICE OF PLANNING

15

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10

10

STEVE R. MIRAGLIA
1419 CAMINO PABLO
MORAGA, CA 94556
415 376 1533

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JUN 21 1988

SECRETARY'S OFFICE

JUNE 15TH, 1988

Mr. Sanford Skaggs
EBMUD Board President
2130 Adeline Street
Oakland, Ca 94623

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JUN 21 1988

OFFICE OF PLANNING

Dear Mr. Skaggs:

I have received both EBMUD's review of the proposed reservoir along with much literature from opponents of the project. I have read both sets of material closely, and agree with the opponents that other alternatives should be explored and that the proposed project should be abandoned.

Sincerely,


Steve Miraglia

10

JUN 21 1988

SECRETARY'S OFFICE

June 16, 1988
RECEIVED

JUN 21 1988

OFFICE OF PLANNING

Dear Sirs,

I'm writing you, as a concerned citizen in the town of Moraga, concerning your proposed construction of the Buckhorn Reservoir. I realize the desperate need for additional water storage in our arid times with the evidence of population expansion and growth everywhere. But I feel that many factors were not studied carefully enough in this proposal. It seems to me that the area of storage seems very distanced from the down site and the route of construction between the two locations impacts on streets already burdened with the flow of construction equipment and school children; a dangerous combination. Is there any other possible location for the pipe to be laid - shorter in distance and closer to the site of delivery - the water is not coming to Moraga but going the other direction. What about storage to the south?

The effects on the climate in this already cool foggy town also need careful consideration. We are currently approaching a gridlock situation here in Moraga due to the extra flow during peak areas of students - College students, high school and soon all grammar school students will be transported individually. The school busing crisis will be abolishing

grammar school bussing in the fall.

I hope you will give this issue a deeper investigation. There must be other sites that would be less impact on the environment and population that exists at this time.

Thank you,

Patricia Reynolds
203 Paso Del Rio
Moraga Ca. 94556

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132

JUN 21 1988

SECRETARY'S OFFICE

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JUN 21 1988

OFFICE OF PLANNING

33 Juniper Way
Moraga, CA 94556
June 16, 1988

TRMUD
Board of Directors
P.O. Box 937
Alamo, CA 94502

Gentlemen,

We are against the proposed Buckhorn Canyon Reservoir.
We agree with the position of the Sierra Club.

16
As residents of Moraga living very close to the proposed pipeline up Camino Pablo Blvd, We are especially worried. Our 7 year old daughter must cross that street to go to Camino Pablo School. Besides the safety issue, we also fear the inevitable traffic tie-ups, mess and noise. The pipeline would have a very negative impact on our environment.

23
21
The environmental impact report on Buckhorn Reservoir is clearly biased and inadequate. We understand there are endangered species and there is expert opinion that the weight of the water would set off earthquakes.

Please consider the Sierra Club position.

Sincerely,

David E. Hiatt Gina Hiatt
David and Gina Hiatt

REC'D

JUN 20

EST. DAY M. U. D.
WAL. CRK. BUS. OFC.

SAN LEANDRO, CALIFORNIA

JUNE 16, 1988

Richard L. Kolm
Asst. Chief Engineer for Planning
E.B.M.U.D. P.O. Box 24055
Oakland, CA. 94623

RECEIVED
JUN 22 1988
OFFICE OF PLANNING

Re: WATER SUPPLY MANAGEMENT PROGRAM
DRAFT EIR.

Rich
Dear Mr. Kolm:

I strongly urge the EBMUD Board of Directors to immediately act toward passage and implementation of the WATER SUPPLY MANAGEMENT PROGRAM. It is also requested that the Board continue to study and adopt alternative and remedial measures that will assure a continuous supply of high-quality water to user-customers in the ultimate service area.

By Priority:

1. First, the Board should immediately pursue the possibility and the feasibility of pumping eastern Delta water to Camanche Reservoir. This alone would add to availability of high-quality Pardee water by replacing downstream obligations from the Mokelumne. (11)
2. The Buckhorn Reservoir or an alternative equal terminal storage facility is a necessity for insurance against shortage or outage. The reserve supply would reduce the rationing level to the 25% maximum as recommended by WAPAC. (6)
3. Aggressively pursue obtainment of allotted American River water, as recommended by WAPAC. (14)
4. Assure the safety of the Delta aquaducts. (7)

The Directors have had foresight and excellent planning, but because of years of delay toward implementation EBMUD has gone from a highly respected service agency to an enforcement agency with regulations, restrictions and water cops. Such failure of implementation has caused severe customer inconvenience and has cost ratepayer millions.

APPROVE THE DRAFT EIR, ADOPT THE CONCEPTS OF THE WATER SUPPLY MANAGEMENT PROGRAM, AND PROCEED TOWARD IMPLEMENTATION ASAP!!

Affiliations:

Drought Task Force, Ala. Co. - delegate
Ala. Co. Transportation Auth. CAC.
Water Action Plan, CAC.
Oro Loma Sanitary District - Director
Associated Homeowners of S.L. - past pres.
Washington Homeowners - past president.
Personnel Board City of San Leandro

Sincerely,
Howard W. Kerr
Howard W. Kerr
15388 Norton Street
San Leandro, CA. 94579
352-1000



ASSOCIATION OF BAY AREA GOVERNMENTS

Mailing Address: ■ P.O. Box 2050 ■ Oakland, CA 94604-2050

RECEIVED

JUN 22 1988

OFFICE OF PLANNING

June 17, 1988

Richard Kolm
East Bay Municipal Utilities District
P.O. box 24055
Oakland, California 94623

Subject: DEIR, Water Supply Management Program

Dear Mr. Kolb:

Thank you for the opportunity to comment on this document. When the Final Environmental Impact Report is released, please send it to Sally Germain at the ABAG Clearinghouse. Although you forwarded a copy to our organization in May, it was not directed to the Clearinghouse. Staff who review environmental documents did not know about the document until Wednesday, June 15th.

Our comments center on two points. We believe this Environmental Impact Report does not adequately address regional issues, nor does it sufficiently document conclusions about future water demand.

Methodology for Estimating Future Water Demand

The CEQA process was implemented to help decision-makers and interested citizens analyze proposed plans and projects. While the document briefly discusses data sources and assumptions, it does not show how it combined ABAG projections with State projections to create population and household forecasts for the year 2020. Consequently, we are unable to verify the reasonableness of the numbers or whether our numbers were interpreted correctly. We suggest that you provide numbers for both before and after having adjusted for climate, geography, and land-use characteristics. This information should be summarized in the EIR, but could be presented in the Technical Report. We also suggest that the Final EIR present data for both 2000 or 2005 (using Projections 87) and 2020 (adding data from the State).

More detailed discussion is also needed on your creation of high and low population projections. Readers cannot evaluate your assumptions and, therefore, cannot comment intelligently on your conclusions about how much water storage is needed.

The EIR would also be more meaningful if data corresponding to your distribution regions, as depicted on page 10-8, were included in the report.

On page 3-7, the EIR states that EBMUD provides 67 mgd for external demand. Discussion of projected water need should describe to whom the 67 mgd are now allocated, the length of the commitment, and any other pertinent information. (4)

Some further discussion should also be provided about the factors you used for modifying water demand projections -- climate, geography, and variance for weather and other conditions (page 3-6). (4)

The quote attributed to ABAG on page 10-7 should include a date. Now that we have produced Projections 85 and Projections 87, ABAG would not state that Projections 83 represents the upper bound of a forecast range. Also, regional numbers only represent an upper bound; for cities and counties, the numbers reflect the amount of growth we think will occur. Hence, local numbers represent a moderate growth forecast. (4)

Adequacy of EIR's Discussion of Growth Issues

Because the District is obligated by law to provide a supply of water to meet the needs of its customers and, as stated on page 2-17, "approval of development is a function of local planning commissions and city councils," the EIR does not evaluate how much new water storage capacity will be used for growth. But as the EIR points out on page 3-1, "without some improvement in the balance between supply and demand, the frequency of water shortages during dry periods will increase." It is for this reason that the EIR is inadequate unless it discusses the ramifications of allocating additional water storage capacity. People who live within the EBMUD service area have a right to know, as part of the District's water supply management program how often, how much and at what cost degradation of service will occur. (4)

Decision-makers and water users need to know how the likelihood of rationing or decreased water quality relate to alternative water supply management policies. Three aspects that must be analyzed are: 1) the population to which water service will ultimately be extended, 2) how much of the growth is assumed to occur in existing versus new service areas, and 3) how EBMUD is calculating the amount of water it needs to reserve for existing users. (6)

If you have any questions about these comments please call Patricia Perry of our staff. Her direct phone number is 415-464-7957.

Sincerely,



Gary Binger
Planning Director

Oakland, CA 94623

SECRETARY'S OFFICE

135

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

and

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

RECEIVED

JUN 23 1985

OFFICE OF PLANNING

3

Very truly yours,

Art. Blendon
SIGNED

Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
Box 24055
Oakland, CA 94623

RECEIVED 136

JUN 23 1988

SECRETARY'S OFFICE

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I
ask you to vote:

RECEIVED

JUN 23 1988

OFFICE OF PLANNING

YES, for Buckhorn or Los Vaqueros reservoir,

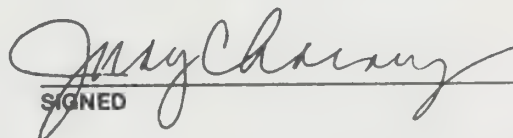
and

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

Very truly yours,


SIGNED

1009 North oak Dr
Walnut Creek Ca
94598

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

RECEIVED
JUN 23 1988
OFFICE OF PLANNING

RECEIVED
JUN 22 1988
SECRETARY'S OFFICE

137

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

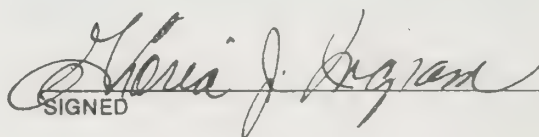
and

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

Very truly yours,


SIGNED

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

RECEIVED

JUN 23 1988

OFFICE OF PLANNING

RECEIVED

JUN 22 1988

SECRETARY'S OFFICE

138

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

and

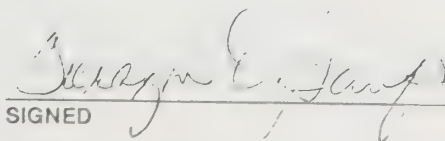
NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

Very truly yours,

SIGNED



July 1988

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

RECEIVED

JUN 22 1988

SECRETARY'S OFFICE

RECEIVED

JUN 23 1988

Dear Board Members:

OFFICE OF PLANNING

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

and

3

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

Very truly yours,



SIGNED



June 16, 1988

Mr. Sanford M. Skaggs, President
Board of Directors
East Bay Municipal Utility District
P. O. Box 24055
Oakland, CA 94623

RECEIVED

JUN 23 1988

OFFICE OF PLANNING

SUBJECT: Water Supply Management Program - April, 1988

Thank you for the opportunity to comment on the Water Supply Management Program proposed by the District.

The Town Council, Town of Danville, wishes to reiterate opposition to the current inclined block rate structure now in effect. Opposition to this rate structure is based on the following points:

1. Fairness

Water consumption in the hot weather (regions 6 and 7) areas of the District are almost twice the level of consumption within the cool bayside regions of the District. Therefore, a 400 gallon per day district-wide allotment amounts to an approximate 50% cutback for the Danville resident. Conversely, a 400 gallon per day allotment for District regions 1 through 5 amounts to no cutback whatsoever since the pre-drought consumption in these areas averaged less than 400 gallons per day.

3

2. Economic Impact

The Danville area is hotter with high evaporation rates which means irrigation is inherently less efficient in these hot weather regions. The district-wide allotment of 400 gallons per day means that Danville residents will, for all practical purposes, be unable to maintain their substantial investment in landscaping.

Compounding this problem is the larger lot sizes found in the newer areas of Contra Costa County when compared to the residential lot sizes in the older areas of the District. Lot sizes in the cool-weather bayside cities are comparatively smaller.

3. Public Agencies

The Town of Danville's primary use of water is for irrigation of parks and medians and other public areas. Therefore, the Town falls within the "irrigation" customer category and is subject to a 50% reduction from 1986 usage.

The maintenance of parks and other public landscaping is particularly important because a loss of landscaping investment must be borne by taxpayers who are also EBMUD ratepayers. At the same time that the public is losing private landscaping because of drought restrictions, public monies and investment is also lost. This creates a double impact upon the ratepayer. (3)

Additionally, parks landscaping is often comprised of turf which is entirely appropriate to the uses of parks facilities. Unfortunately, turf is a higher water use than groundcovers. At the least, meters serving turfed play areas and parks should be granted supplemental allocations. (14)

Public landscaping is for the use and enjoyment of all and should fall within a special customer category that recognizes that difference.

The Town of Danville strongly supports water conservation and has implemented an aggressive conservation program beginning well in advance of the water shortage. We believe we will meet the required 50% cutback but at some cost in terms of public enjoyment of the aesthetic and recreational uses of public facilities.

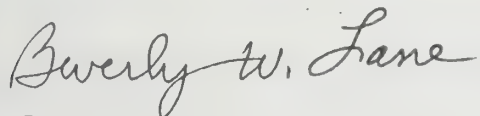
In summary, it is our recommendation that the current uniform allotment and rate structure be re-evaluated and an allotment and rate structure that recognizes regional differences be implemented. We also urge the District to consider implementation of a new rate category for public agencies.

The Town Council is currently considering information concerning the issue of construction of additional reservoir storage capacity. This is a complex issue and the Council will require additional time and study to adopt a position.

June 16, 1988
Page 3

I will continue to keep you informed of our concerns.

Sincerely,

A handwritten signature in cursive script that reads "Beverly W. Lane".

Beverly W. Lane
Mayor

cc: Richard Kolm, Assistant Chief Engineer for Planning
EBMUD

a:ebmud

Mr. Samuel M. Griggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

RECEIVED
JUN 24 1988
SECRETARY'S OFFICE

141

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,
and

RECEIVED
JUN 24 1988
OFFICE OF PLANNING

NO, to unfair rationing where the burden is not equally shared by all customers,
and

NO, to an increasing block rate structure.

3

Very truly yours,


SIGNED

and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

RECEIVED
JUN 24 1988
SECRETARY'S OFFICE

142

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I
urge you to vote:

RECEIVED
JUN 24 1988
OFFICE OF PLANNING

YES, for Buckhorn or Los Vaqueros reservoir, OR both

and

~~NO, to unfair rationing where the burden is not equally shared by all customers,~~

and

~~NO, to an increasing block rate structure.~~

Very truly yours,

SIGNED

Gladys Engman

12085 Felt Rd.
Berkeley, CA 94706

July 1988

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

RECEIVED

JUN 27 1988

SECRETARY'S OFFICE

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

RECEIVED

JUN 28 1988

OFFICE OF PLANNING

YES, for Buckhorn or Los Vaqueros reservoir,

and

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

Very truly yours,

Katharine M. Schnadt
SIGNED
231 Greenbrook Drive
Danville, CA 94526

July 1988

144

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

RECEIVED

JUN 27 1988

SECRETARY'S OFFICE

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I
urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

and

NO, to unfair rationing where the burden is not equally shared by all customers,

and


NO, to an increasing block rate structure.

RECEIVED

JUN 28 1988

OFFICE OF PLANNING

Very truly yours,


SIGNED

Mr. & Mrs. Homer J. Olsen
18 Adele Court
Alamo, Ca. 94507

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

RECEIVED

JUN 28 1983

OFFICE OF PLANNING

YES, for Buckhorn or Los Vaqueros reservoir,

and

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

Very truly yours,


SIGNED R. R. Tresser



July 1988

146

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

RECEIVED

JUN 28 1988

SECRETARY'S OFFICE

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I
urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

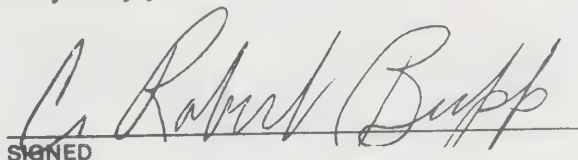
and

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

Very truly yours,


SIGNED

C. Robert & Barbara J. Bupp
1005 Katherine Lane
Lafayette, CA 94549

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

147
RECEIVED
JUN 28 1988
SECRETARY'S OFFICE

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

and

NO, to unfair rationing where the burden is not equally shared by all customers,

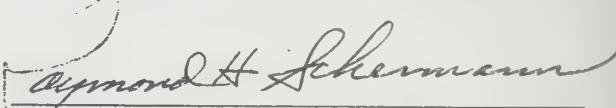
and

NO, to an increasing block rate structure.

RECEIVED
JUN 28 1988

OFFICE OF PLANNING

Very truly yours,


SIGNED

★
★
★
RAYMOND H. SCHERMANN
257 LAS LOMAS HWY
WALNUT CREEK, CA 94598

P.O. Box 24055
Oakland, CA 94623

RECEIVED
JUN 28 1988
SECRETARY'S OFFICE

148

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I
urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

and

3 NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

Very truly yours,



SIGNED

MR ROBERT L STOSICK
3253 JUDY LANE
LAFAYETTE CA 94549



MADD

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

RECEIVED

JUN 26 1983

SECRETARY

149

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

and

3

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

RECEIVED

JUN 28 1983

OFFICE OF PLANNING

Very truly yours,

Leo H. Schell
SIGNED
509 Bavarian Court
Lafayette, Calif.
94549

East Bay Municipal Utility District
Box 24055
Oakland, CA 94623

RECEIVED
JUN 28 1988 150
SECRETARY'S OFFICE

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I
ask you to vote:

YES, for Buckhorn or Los Vaqueros reservoir, *but only for current residents' use*

and

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

Very truly yours,

RECEIVED

JUN 28 1988

OFFICE OF PLANNING

Karen A. Schrock
SIGNED *931 Blamer Road*
Danville, CA 94526

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

RECEIVED
JUL 28 1988
SECRETARY'S OFFICE

151

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

and

3

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

Very truly yours,

Phyllis J. Elwood
SIGNED

PHYLLIS J. ELWOOD
3221 LOS PALOS CIR.
LAFAYETTE, CA. 94549



East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

JUN 28 1988
SECRETARY'S OFFICE

152

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I
urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

and

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

RECEIVED

JUN 28 1988

OFFICE OF PLANNING

3

Very truly yours,

SIGNED

JOSEPH S. SYKES
1473 WHITECLIFF WAY
OAKLAND, CA 94612

Mr. Sanford M. Skaggs, President
and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

153
RECEIVED

JUN 28 1988

SECRETARY'S OFFICE

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

and

RECEIVED

JUN 28 1988

3

NO, to unfair rationing where the burden is not equally shared by all customers OFFICE OF PLANNING

and

NO, to an increasing block rate structure.

Very truly yours,

C. W. Fitzgerald
SIGNED
932 Quiet Pl. Ct.
Walnut Creek, Calif.
94598

East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

JUN 28 1988
SECRETARY'S OFFICE

154

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

and

NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

RECEIVED

JUN 28 1988

OFFICE OF PLANNING

Very truly yours,

H. CURRY
11 GREEN VALLEY DR
LAFAYETTE, CA 94549

Haworth J. Curry
SIGNED
11 Green Valley Dr.
Lafayette CA 94549

and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

RECEIVED
JUN 28 1988
SECRETARY'S OFFICE

155

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

and


3 NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

RECEIVED
JUN 28 1988
OFFICE OF PLANNING

Very truly yours,



SIGNED
Jack R. Talan
1143 Perales St.
Lafayette, CA 94549

and other Board members.
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

JUN 28 1988

156

SECRETARY'S OFFICE

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

RECEIVED

JUN 28 1988

OFFICE OF PLANNING

YES, for Buckhorn or Los Vaqueros reservoir,

and

3 NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

Very truly yours,

Dr. H. Schoenholz

SIGNED

SCHOENHOLZ
15 FRASER DRIVE
WALNUT CREEK, CA 94596

JUN 28 1988

SECRETARY'S OFFICE

W. A. T. E. R.

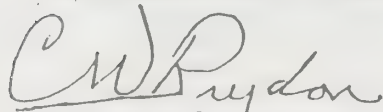
696 San Ramon Valley Blvd., Suite 300, Danville, CA 94526

TIRED OF WATER RATIONING? READ ON - - -

W.A.T.E.R., is a committee of concerned citizens who oppose unfair rationing and who are appalled at the prospect of continuing water shortages. We urge you to send this letter to the Board of Directors of EBMUD. Certain Board members want to impose a permanent block rate structure, similar to the rate structure being used during the drought. This would require people living in warmer areas to continue to pay higher rates. We believe this is unfair.

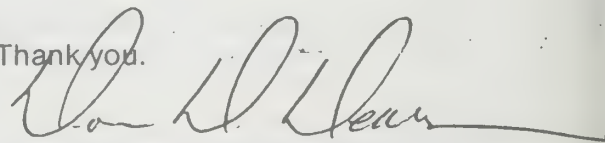
Additional terminal storage is needed to protect against future water shortages resulting from drought or failure of the aqueduct.

WE URGE YOU TO MAIL THIS LETTER WITHOUT DELAY!



C. W. Brydon, Chairman
Steering Committee, W.A.T.E.R.

Thank you.



Donn D. Dears, Chairman
Resource Planning Committee, W.A.T.E.R.

-----X

I think EBMUD should explain to its customers why, ten years after doubling our water rates July 1988 (6) in order to provide funds for new dams and other Board members. and aqueduct improvements, nothing at all has been done - and each year the pay of all the EBMUD employees and mgmt. has been increased above and beyond the COL inflator. This sounds like an appropriate topic for an investigative reporter.

Mr. Sanford M. Skaggs, President
East Bay Municipal Utility District
P.O. Box 24055
Oakland, CA 94623

Dear Board Members:

I am a resident of the East Bay Municipal Utility District and favor additional terminal storage. I urge you to vote:

YES, for Buckhorn or Los Vaqueros reservoir,

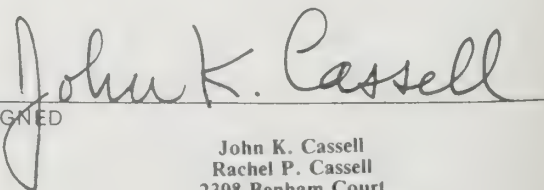
and

(3) NO, to unfair rationing where the burden is not equally shared by all customers,

and

NO, to an increasing block rate structure.

Very truly yours,



SIGNED

John K. Cassell
Rachel P. Cassell
2398 Benham Court
Walnut Creek, CA 94596

RECEIVED

JUN 28 1988

OFFICE OF PLANNING

June 27, 1988

Dear Sirs

We adamantly oppose the destruction of the Buckhorn Canyon by the construction of the dam you have proposed. The exorbitant cost as well as the lengthy, unsightly and dangerous construction this would incur, we feel, is an ill-advised solution to an otherwise manageable water shortage in this area.

16

RECEIVED
OFFICE OF PLANNING

Even in light of the inequitable distribution of available water in this State, the citizens of this area have shown in the past their willingness to conserve in temporary periods of drought.

10

Sincerely,

Mary A. Dumas
Lloyd D. Dumas458 Hillfield Pl
Moraga, Ca
94556

15
JOHN K. VAN DE KAMP
Attorney General

State of California
DEPARTMENT OF JUSTICE



350 McALLISTER STREET, ROOM 6000
SAN FRANCISCO 94102
(415) 557-2544

RECEIVED

JUN 29 1988

OFFICE OF PLANNING

June 29, 1988

(415) 557-4111

Richard L. Kolm
Assistant Chief Engineer for Planning
EBMUD, P.O. Box 24055
Oakland, CA 94623

Dear Mr. Kolm:

Re: EBMUD Water Supply Management Program, Comments of DEIR

This letter contains the comments of the Attorney General of the State of California regarding the East Bay Municipal Utility District's (EBMUD) Draft Environmental Impact Report (DEIR) for the Water Supply Management Program, dated April 1988. We appreciate the opportunity to submit these comments after the official submission date and hope that they will be included in the official record.

The Attorney General submits these comments pursuant to his independent constitutional, common law, and statutory authority to represent the public interest. Along with other State agencies, the Attorney General has the power to protect the natural resources of the State from pollution, impairment, or destruction. (See Cal. Const. art. V, § 13; Cal. Gov. code §§ 12511, 12600-12; D'Amico v. Board of Medical Examiners (1974) 11 Cal.3d 1, 14-15.) These comments are made on behalf of the Attorney General and not on behalf of any other California agency or office.

This letter focuses on major concepts and concerns and is not an exhaustive discussion of all issues. While we believe that the DEIR generally presents a useful and informative discussion of the environmental aspects of the Program, the presentation of alternatives falls short of the requirements of the California Environmental Quality Act.

COMMENTS

The legislature enacted the California Environmental Quality Act (CEQA), Pub. Resources Code §§ 21000, et seq., to "[e]nsure that

Richard L. Kolm
June 29, 1988
page 2

the long-term protection of the environment shall be the guiding criterion in public decisions," (Pub. Resources Code § 21001(d)), and intended CEQA "to be interpreted in such a manner as to afford the fullest possible protection to the environment. . . ." (No Oil, Inc. v. City of Los Angeles (1974) 13 Cal.3d 68, 83 [11 Cal.Rptr. 34, 529 P. 2d 66], quoting Friends of Mammoth v. Board of Supervisors (1972) 8 Cal.3d 247, 259 [104 Cal.Rptr. 761, 502 P. 2d 1049].) The EIR is the "heart of CEQA. . . ." (Guidelines¹ § 15003(a); City of Carmel-by-the Sea v. Board of Supervisors (1976) 183 Cal.App.3d 229, 241.) Most importantly, the purpose of the EIR is to "demonstrate to an apprehensive citizenry that the agency has in fact analyzed and considered the ecological implications of its actions." (No Oil, supra, 13 Cal.3d at 86.).

A key element of CEQA is its requirement of formal evaluation of alternatives to proposed actions. CEQA specifies that the EIR must set forth project alternatives in a "detailed statement." (Pub. Resources Code § 21100(d).) EIRs must

[d]escribe a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project, and evaluate the merits of the alternatives.

Guidelines § 15126(d). As the Court stated in Monroe County Conservation Council, Inc. v. Volpe (2d Cir. 1972) 472 F.2d 693, 697-98, interpreting the equivalent provision of the National Environmental Policy Act: "The requirement for a thorough study and a detailed description of alternatives, . . . is the linchpin of the entire impact [report]." (See also San Bernardino Valley Audobon Society, Inc. v. County of San Bernardino (1984) 155 Cal.App.3d 738, 750-51 ("an EIR must produce information sufficient to permit a reasonable choice of alternatives so far as environmental aspects are concerned. . . .").

The five page discussion of alternatives contained in the DEIR for the massive Water Supply Management Program is conclusory and insufficiently detailed to allow the public and the decision-makers a meaningful view of the range of possibilities. The more extensive discussion in the Technical Report is better, but still insufficient.

The Guidelines are quite explicit on the nature of the alternatives discussion that an EIR is required to contain:

1. The Guidelines are published at 14 Cal. Admin. Code §§15000, et seq., and are binding on all state and local agencies.

Alternatives to the Proposed Action. Describe a range of reasonable alternatives to the project, or to the location of the project, which could feasibly attain the basic objectives of the project, and evaluate the comparative merits of the alternatives. (110)

(1) If there is a specific proposed project or a preferred alternative, explain why other alternatives were rejected in favor of the proposal if they were considered in developing the proposal.

(2) The specific alternative of "no project" shall also be evaluated along with the impact. If the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among all the other alternatives.

(3) The discussion of alternatives shall focus on alternatives capable of eliminating any significant adverse environmental effects or reducing them to a level of insignificance, even if these alternatives would impede to some degree the attainment of the project objectives or would be more costly.

(4) If an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternative shall be discussed but in less detail than the significant effects of the project as proposed. (County of Inyo v. City of Los Angeles 124 Cal.App.3d 1.)

(5) The range of alternatives required in an EIR is governed by "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The key issue is whether the selection and discussion of alternatives fosters informed public participation. An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative. (Residents Ad Hoc Stadium Com. v. Board of Trustees (1979) 89 Cal.App.3d 274.)

(Guidelines § 15126(d). (emphasis added). See also Pub. Resources Code §§ 21002, 21061, 21100; County of Inyo v. City of Los Angeles 71 Cal.App.3d 185, 200-03.)

The DEIR discusses a "no project" alternative and three groups of alternatives: increased security of existing supply, reduced water shortages, and reduced public health and safety concerns. According to the DEIR, no alternatives exist in the final group. (DEIR 4-5). By dividing alternatives in this manner, the DEIR fails to discuss programmatic alternatives. For example, could a combination of aqueduct security, water conservation, and agreements with neighboring water agencies form a viable alternative as a unit? The DEIR and the Technical Report offer no insight. (10)

Most importantly, the alternatives discussion lacks sufficient detail for comparison and, therefore, for informed public participation. The no project alternative does not even mention environmental benefits of no action. It simply states a probability of levee failure and long-term outages. The DEIR and the Technical Report do not discuss in any meaningful detail the basis of the projections of 13 to 17 month outages from earthquake damage. CEQA requires greater discussion of the no project alternative.

In its four sentence discussion of the Mokelumne Aqueduct Replacement alternative, the DEIR states that the "environmental impact of this alternative would be less than that of the [Program] because no new land would be inundated." (DEIR 4-2.) It then states that field testing and preliminary engineering would be necessary before possible implementation. The brief discussion appears to undermine the assumptions of the entire Program. If this less environmentally damaging alternative is feasible and sufficient, why does the Program include a new terminal reservoir? The discussion raises additional questions: (12)
How and when will EBMUD determine feasibility? Will EBMUD proceed with the terminal reservoir plan in the interim? How will the decision be made? Will there be public review? What effect will a feasible aqueduct replacement have on the projects of water availability? This information is crucial to the Program and to full consideration and understanding of the alternatives and environmental effects. While the Technical Report offers more than the four sentences of the DEIR, it also fails to answer these and related questions.

Similarly, the discussion of the next alternative, the American River Aqueduct, raises numerous questions directly relevant to decision-making for the entire Program. The DEIR states that the American River Aqueduct is a viable alternative but for unresolved legal problems. (DEIR 4-2.) On the next page of the DEIR, it states, "there are indications that the litigation may soon be resolved." What are the legal problems? How may it be resolved? What effect will resolution of the suit have on feasibility? Again, CEQA requires a much more substantial (14)

Richard L. Kolm
June 29, 1988
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discussion, allowing an informed choice.

The remaining discussion of alternatives (alternative supply, new source of supply, water conservation, water reclamation, and water exchange) also suffer from conclusory presentations both in the DEIR and Technical Report. Neither report identifies an environmentally superior alternative among all the alternatives. The pros and cons of each alternative should be presented in more detail thus allowing meaningful public review and participation.

We appreciate the work entailed in drafting the EIR and in formulating and presenting project alternatives. Nonetheless, we strongly urge EBMUD to revise the EIR alternative discussion to include programmatic alternatives rather than limiting the analysis to alternatives to aspects of the Program. Further, the alternatives discussion should include substantially more detail regarding environmental effects, contingencies, and how and when pending Program decisions will be made.

Thank you for your consideration. '

Very truly yours,

JOHN K. VAN DE KAMP
Attorney General

KEN ALEX
Deputy Attorney General

Secretary's Office
PEM:mp/7-28-88/pem/37

From Board Workshop of July 12, 1988 re Water Supply Management
Program: Director Burke's Critique of the Draft EIR

BURKE: One thing that concerned me in reading over the technical report in the draft environmental impact report, particularly with regard to the latter, I found that the draft EIR was inadequate in a number of ways. And I basically have a laundry list of points I want to make sure, I would like to hear staff's response to in terms of inclusion. I believe that the document currently does not meet CEQA, California Environmental Quality Act, in a number of ways, and I would like to run over this list to make sure that these points are going to be covered in the revised draft.

GILBERT: Okay, can you give it to us in writing so that we can....

BURKE: I would like to make a public statement of it; I will also give it to you in writing.

KOFMAN: You're certainly entitled to make a statement. I'm just very surprised that this was not submitted during the time of the....

BURKE: Ken, I've called for a Board meeting on this very topic since we had the public hearing, and this is the first time the Board has had a chance to comment on it. I think that it's more appropriate to comment when the Board, it's appropriate for the Board to comment, which is right now.

McLEAN: Why can't you make it in writing, Helen? All the rest of us have made our comments in writing. It seems to me that any presentation of something should be made in writing rather than ask the public....

BURKE: Walt, as a member of the Board, I think it's a question of personal privilege if I wish to make my comments publicly. I think I have every right in the world to do that. I'll also put them in writing, and with that I would like to go over the points.

First of all, I would like to say that I'm pleased that the staff has decided to do a revised draft, and I applaud them for that. I also support the staff in their try for a second public hearing. I think that's another good recommendation, and I would support that. I think the major problem I have with the document as it stands now is that it's basically a self-serving document in that the main purpose of it seems to be to propose Buckhorn and to dismiss all other alternatives out of hand. There's very

short shift given to any other alternatives, and I think most of the statements in here -- the planning assumptions have been rearranged to support a larger project, and so forth -- and I'll go over those on a point-by-point basis.

First of all, a key assumption of the draft environmental impact report and the technical report is that an earthquake of the magnitude of 1 in 80 years would sever our Mokelumne aqueduct and create a 13-month outage. I think the 13-month outage, that period of time, is never clearly justified. The consultant's report that this assumption is based on, is cited, is never cited, but it's merely listed in the back of the document. And if you read that document, you will note that the District is assuming it will take six months before repairs begin. And I guess I would question that. I think given the other emergencies, the failure of levees and so forth, in the Delta there's immediate FEMA action, that's Federal emergency administration action, immediate state emergency action, so this six months, I think, seems like an unduly long time for an emergency of that magnitude. One question I would have is why not ask the Corps to do an estimate of emergency repairs? If there was an outage in the Delta due to earthquake, how long would it take the Corps to respond? And I think we should have a backup memo or some correspondence or some kind of a study detailing that.

There's also an assumption that there will be unaccountable levels of salt at that point, but then the question comes well what about the role of Bixler? The District has taken a lot of pains to set up our Bixler Pumping Plant which will have some treatment facilities. What about the possibility of Bixler handling that?

The EIR also arbitrarily drops maximum allowable deficiency from 39 percent to 25 percent. Board policy as it now stands calls for planning at 39 percent deficiency level, which was approximately the same as in 1976-77. This is a Board decision, and yet it is a basic assumption in this document. The Board has not taken action on that matter.

There's also a number of significant major environmental impacts that spring from this change in policy. By going from 39 percent to 25 percent it greatly increases the size of the project that would be necessary. So, I guess my question there -- I think that as a point of procedure the Board should take up this policy question before it appears on a draft environmental impact report, a technical report, on major water supply decisions.

Another whole area that is not adequately covered in the document is this part on interties. Right now we do have the possibility of emergency interties with San Francisco, with Contra Costa Water District, with the City of Hayward, and the District did look into it somewhat and comes up with a cursory study saying that "yes, San Francisco could deliver 10,000 acre feet per year

to us through the interties". What I don't think has been done, what I would very much like to see, is a study on the potential of permanent and larger interties with the various districts. And I think that question is superficially treated in the document, but there's not an in-depth look at it, and I would like to see more attention given to that. 10

A major problem I have with the document is that conservation is really not taken seriously. It seems to be downplayed in order to justify large projects such as Buckhorn. In the Urban Water Management Plan, which the Board adopted back in 1985, conservation savings, the District projects, are 20 million gallons a year by the year 2020, with a total demand figure of 256 million gallons a day. The Water Supply Management Plan, however, says that it will continue those measures, referring to measures in the Urban Water Management Plan, but it now projects savings of only 7 million gallons a day rather than 20. What happen to that extra 13 million gallons a day? Where did they go? Also, the total demand figure has been raised to 270 million gallons a day, an increase of 14 mgd. No reason is cited for this. Why? Where do those figures come from? It's these shifts in assumptions and projections like this that makes these documents less than credible. 10 4

Water pricing as a major way of achieving conservation is dismissed based on a vague reference to an internal study by EBMUD. DWR and other experts in the field have long maintained the effectiveness of water pricing as a way to save water. What are the details of the internal study? Why is DWR's position on this not looked into more? 10

The size of the proposed reservoir is another matter for concern. A year ago EBMUD called for a 40,000 acre foot annual reservoir. Now, this year they're calling for a reservoir over three times that size - 145,000 acre feet. Why is it, why all of a sudden there's this three-fold expectation in the capacity of the new reservoir? That's not explained. And there are ways that EBMUD could, through operation of their existing terminal storage reservoirs, generate additional water. The District asserts in the Draft EIR in the technical report that 17.5 thousand acre feet is unusable in our local reservoirs. This assumes that there's no pumping, I think with pumping, with a portable pump, this water could be accessed, and I'd like to see that option looked at in the revised Draft EIR. 10 6

Right now, the reservoirs are operated to drop in the summer time and to be at higher levels in the winter time. The reservoirs could be operated closer to capacity and keeping the reservoirs higher in the summer time. And, once again, there's no interties looked at. It's possible through interties, we could have more flexible operation of our terminal storage reservoirs. 10

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feasible alternatives to Buckhorn. First of all, CEQA, the California Environmental Quality Act, requires that the environmentally superior alternative be indicated and looked into. This is not done in the Draft EIR. There is no cost-benefit analysis of each alternative. If we had a cost-benefit analysis, we might be able to better compare some of these alternatives, and that has not been done. I think that there's a number of options that could be looked into to handle a drought situation short of actually building a new reservoir. One would be a conjunctive-use program. The downstream users that EBMUD serves could use surface waters in wet years and then be encouraged to pump in dry years. Furthermore EBMUD can, and actually they have done this, gone out to look at the possibility of dry-year water rights purchase. That's proceeding and I applaud the staff on their initiative in that area. Another option is pumping from the Delta, and again the staff is looking into that, so that's good. And then another option is purchase of treated water from Contra Costa Water District in periods of dry times. I think with that possibility, in an emergency situation, is another option. There are also some security options that haven't been looked at. What is the use of interties, which I have already mentioned? Another is to build an earthquake-proof aqueduct either across the Delta or around the Delta. Another is to use of Delta water, and, of course, conservation and reclamation.

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Another point that I'd like to make that I don't think has been covered enough is the possibilities of dam failure. What we're talking about, at the present time, is a dam that's right above Upper San Leandro that would hold roughly three times the water that is currently behind Upper San Leandro, so you're putting a lot of pressure behind a couple of dams there, and I think we should look at the inundation pattern. And there's an estimate that the City of San Leandro would be affected and some 33 to 39,000 people, it is estimated, could be affected by a dam

failure in San Leandro. I think that this whole question of dam failure should be carefully looked at, and inundation maps drawn and so on, so that people who live underneath the reservoir will know exactly what the potential risks are with regard to the building of a dam there.

The last point I would like to make is that the significant impacts of the project have not been adequately covered. The District in its revised draft should very carefully cover that.

That basically summarizes my comments, and I think it's important for the District in their next revised EIR to look at all the other alternatives, to include the growth-inducing impacts, and to meet the spirit and intent of CEQA. I think right now there are several ways in which, there are areas that are supposed to be covered under CEQA which are not covered, and I recommend strongly that we do cover those points, staff, when they come out with the revised draft environmental impact report.

SKAGGS: I suggest that, even though the time for comment on the EIR has long since run, the staff transcribe Helen's comments and treat them as if they were comments, responding to them either by appropriate revisions to the new draft or by responses which indicate why in the author's belief additional work is not necessary in the areas she specified or elsewhere. But essentially we ought to treat them exactly like comments that were received during the comment period and respond to them accordingly.

* * *

Secretary's Office
7-28-88/pem/37

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